

FIG. 4

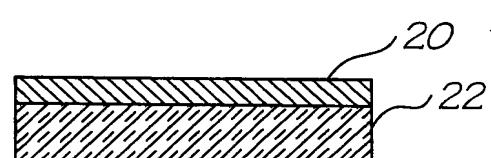


FIG. 5

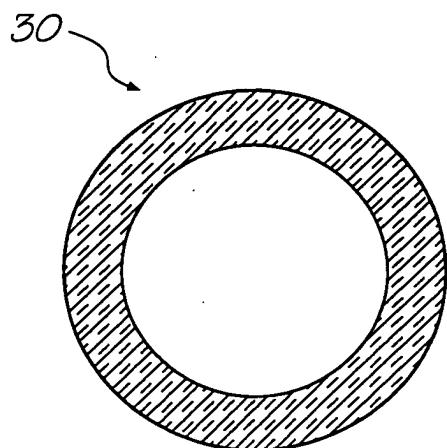


FIG. 6

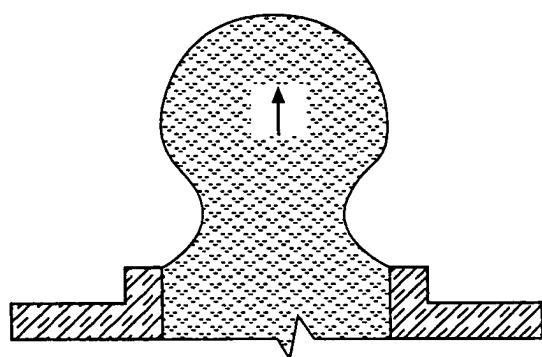


FIG. 7

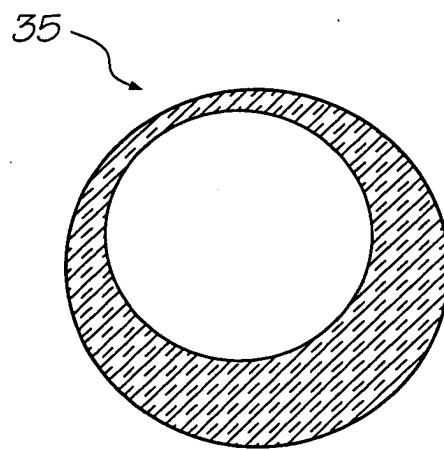


FIG. 8

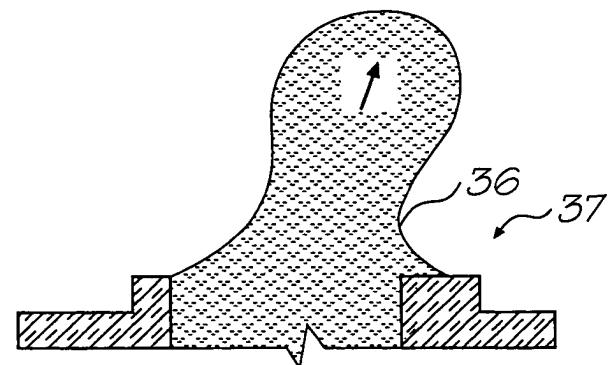


FIG. 9

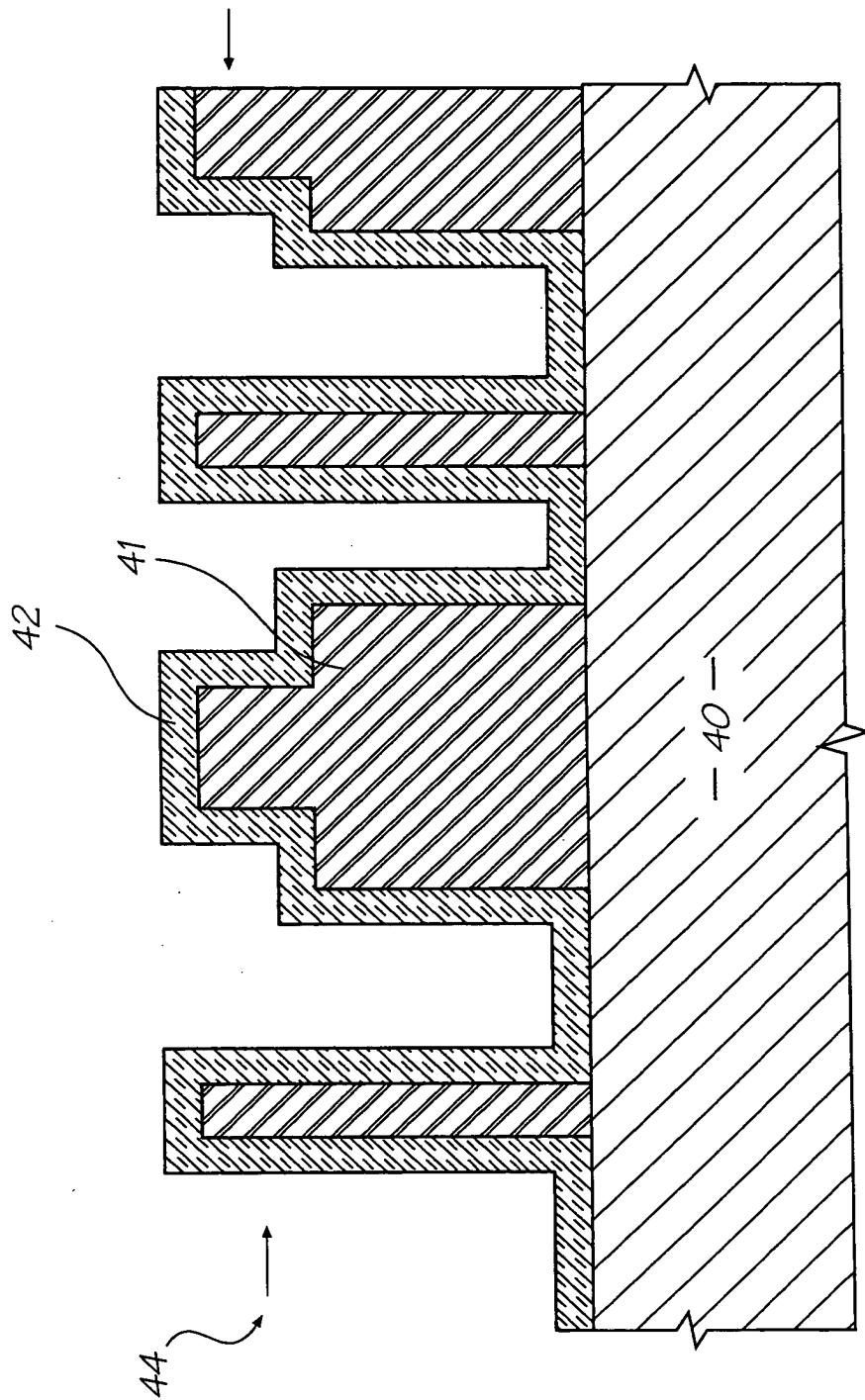


FIG. 10

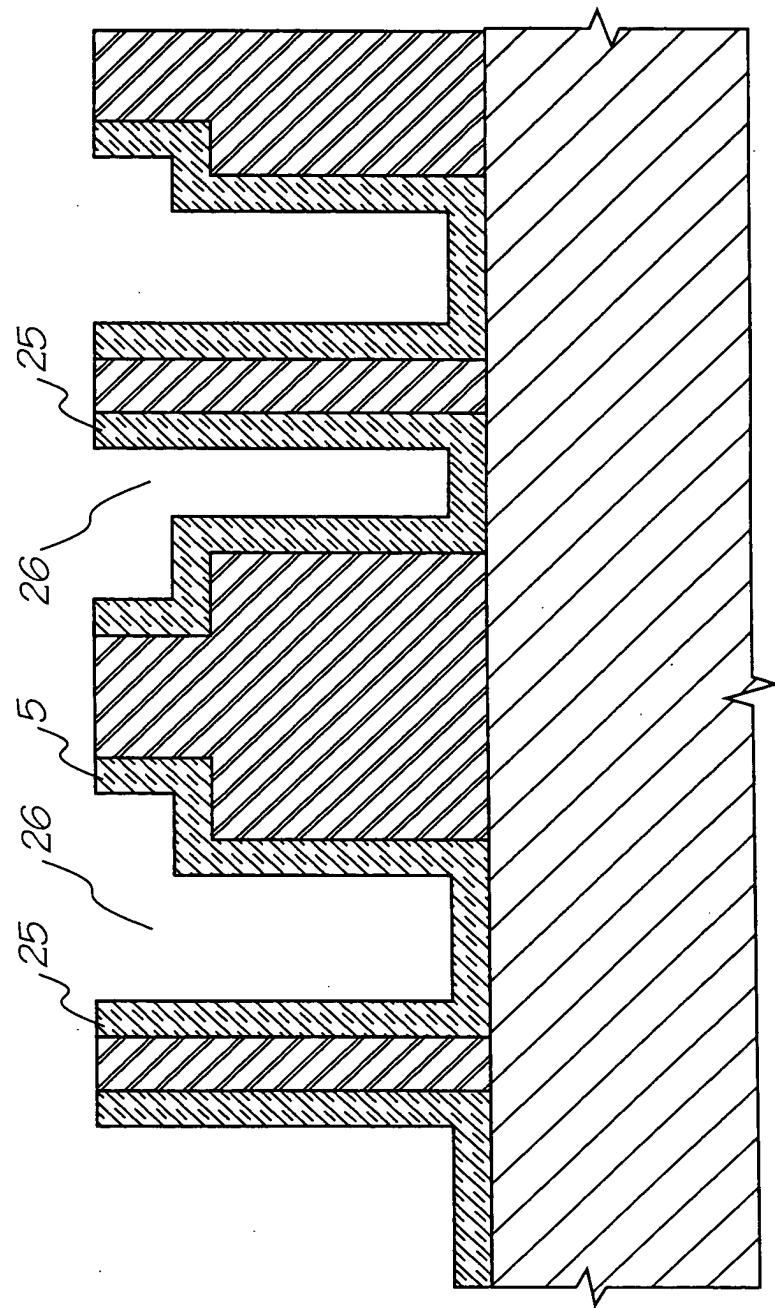


FIG. 11

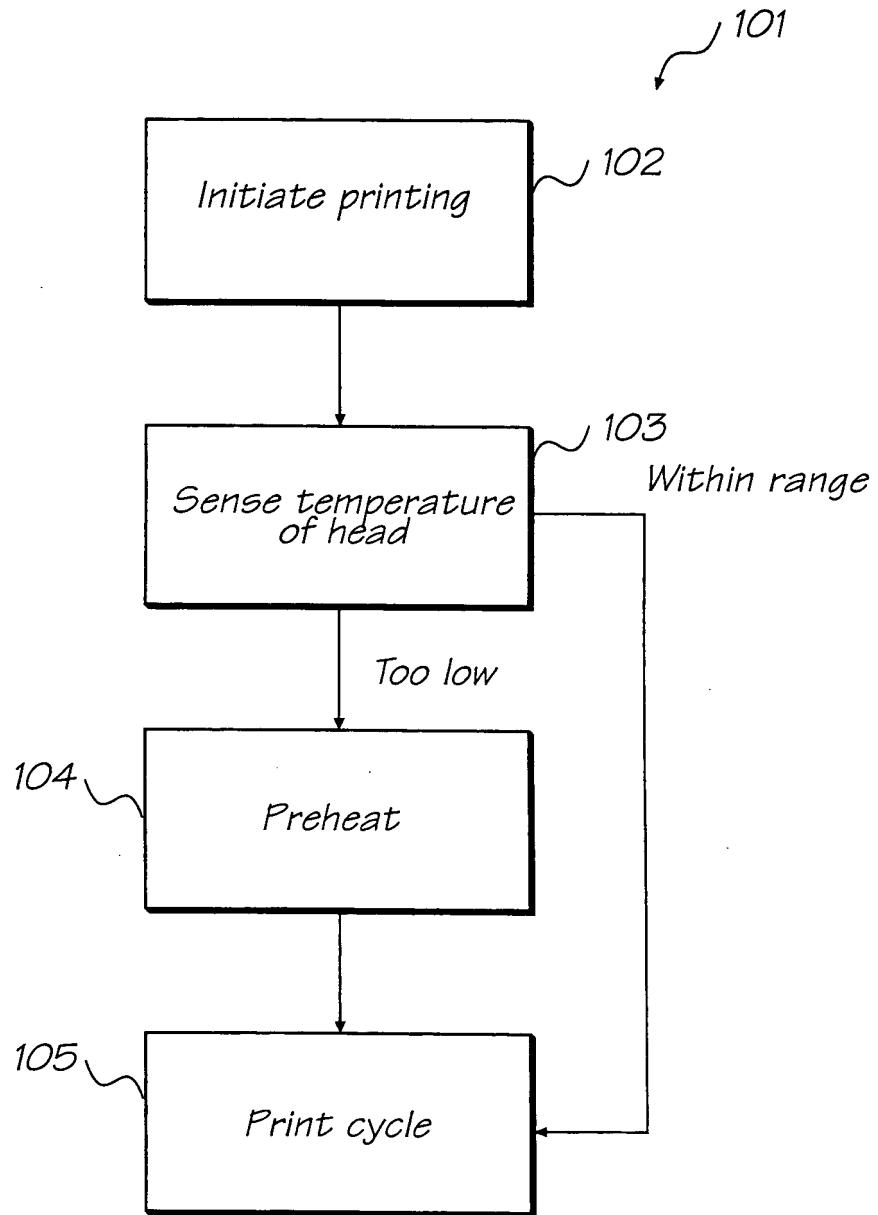


FIG. 12

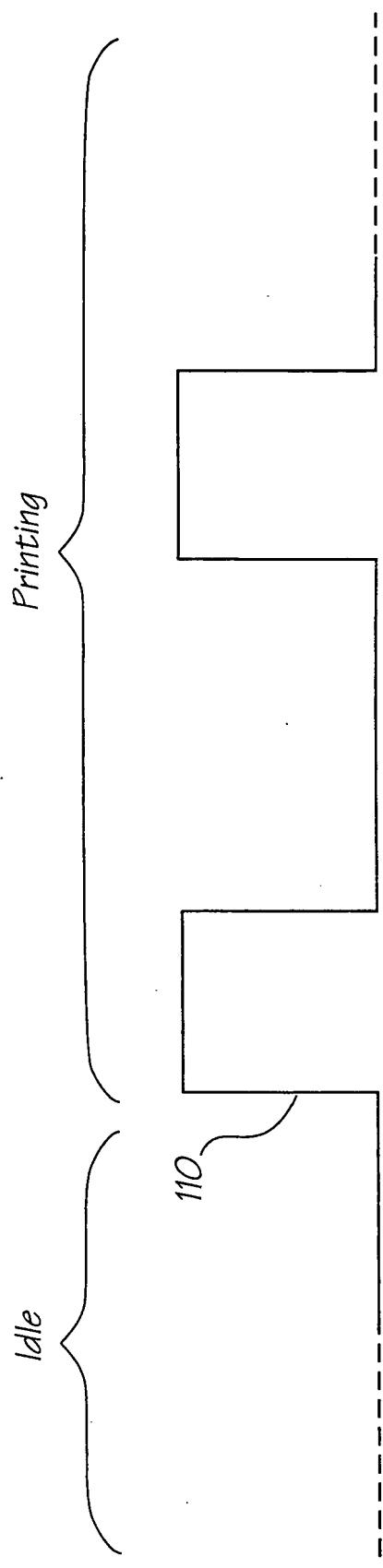


FIG. 13

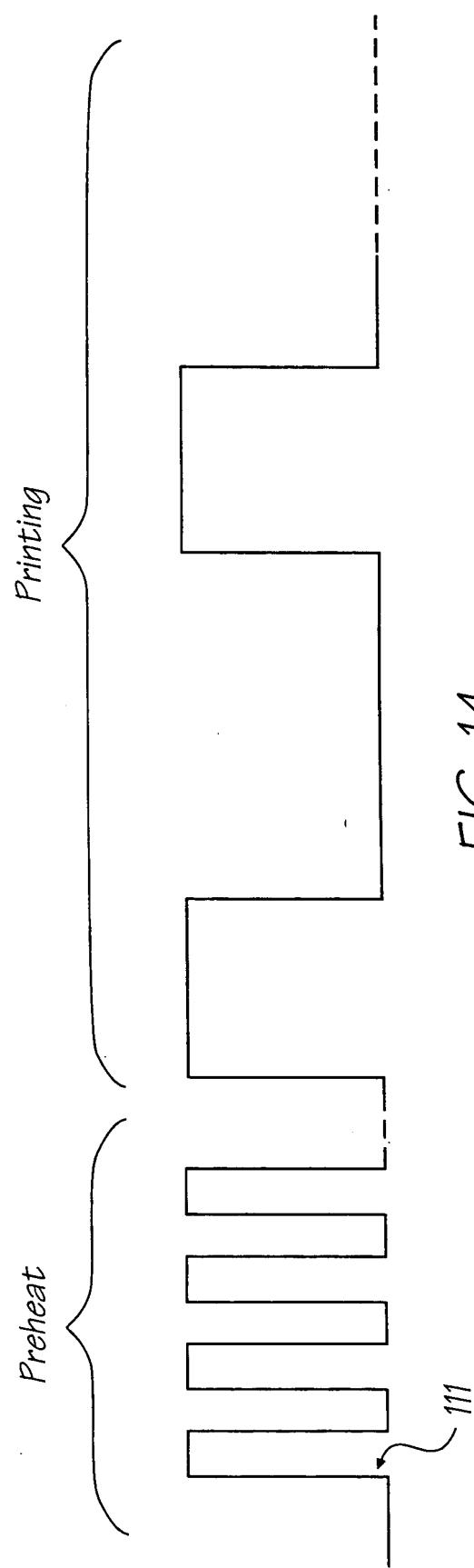


FIG. 14

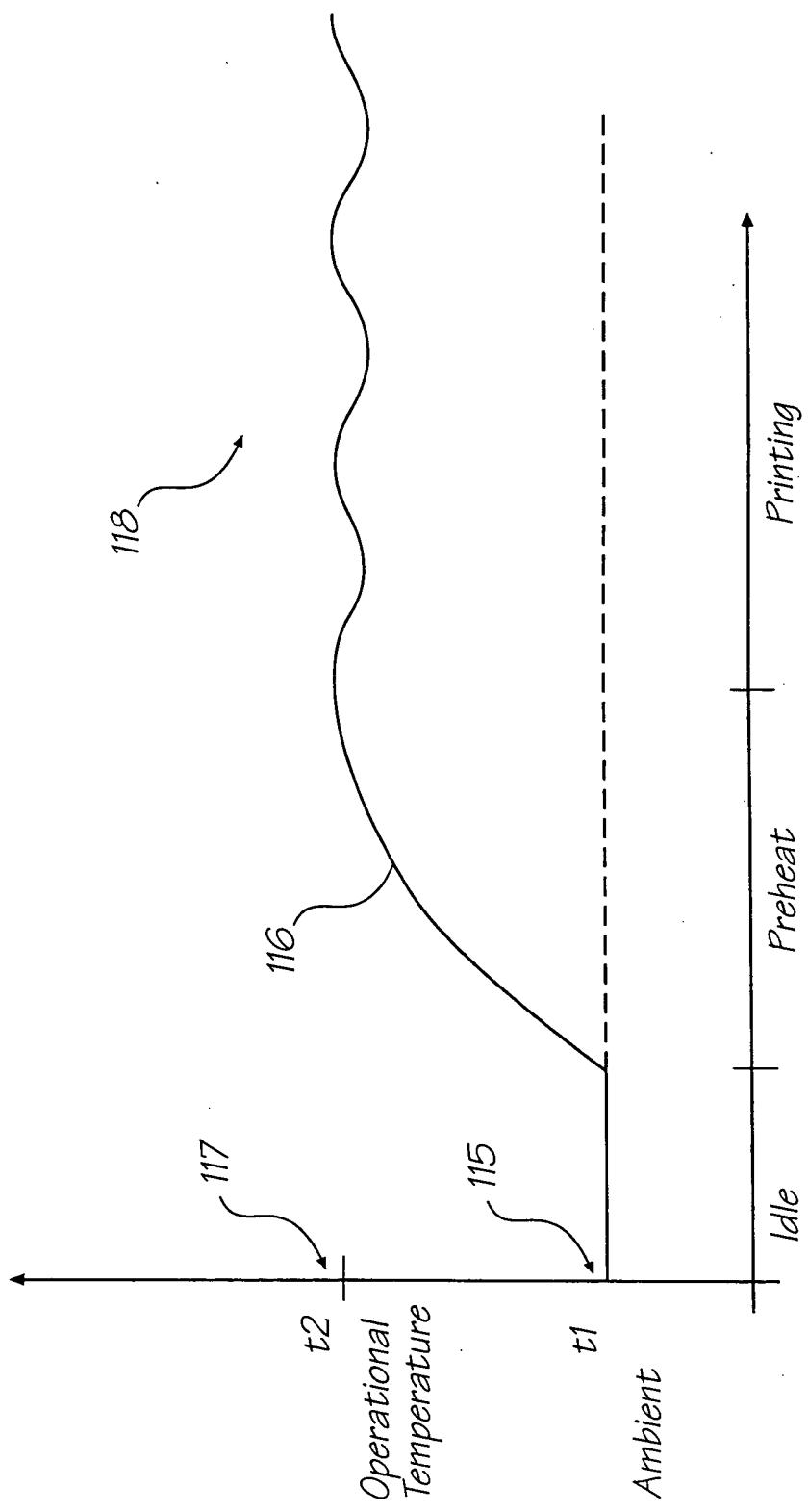


FIG. 15

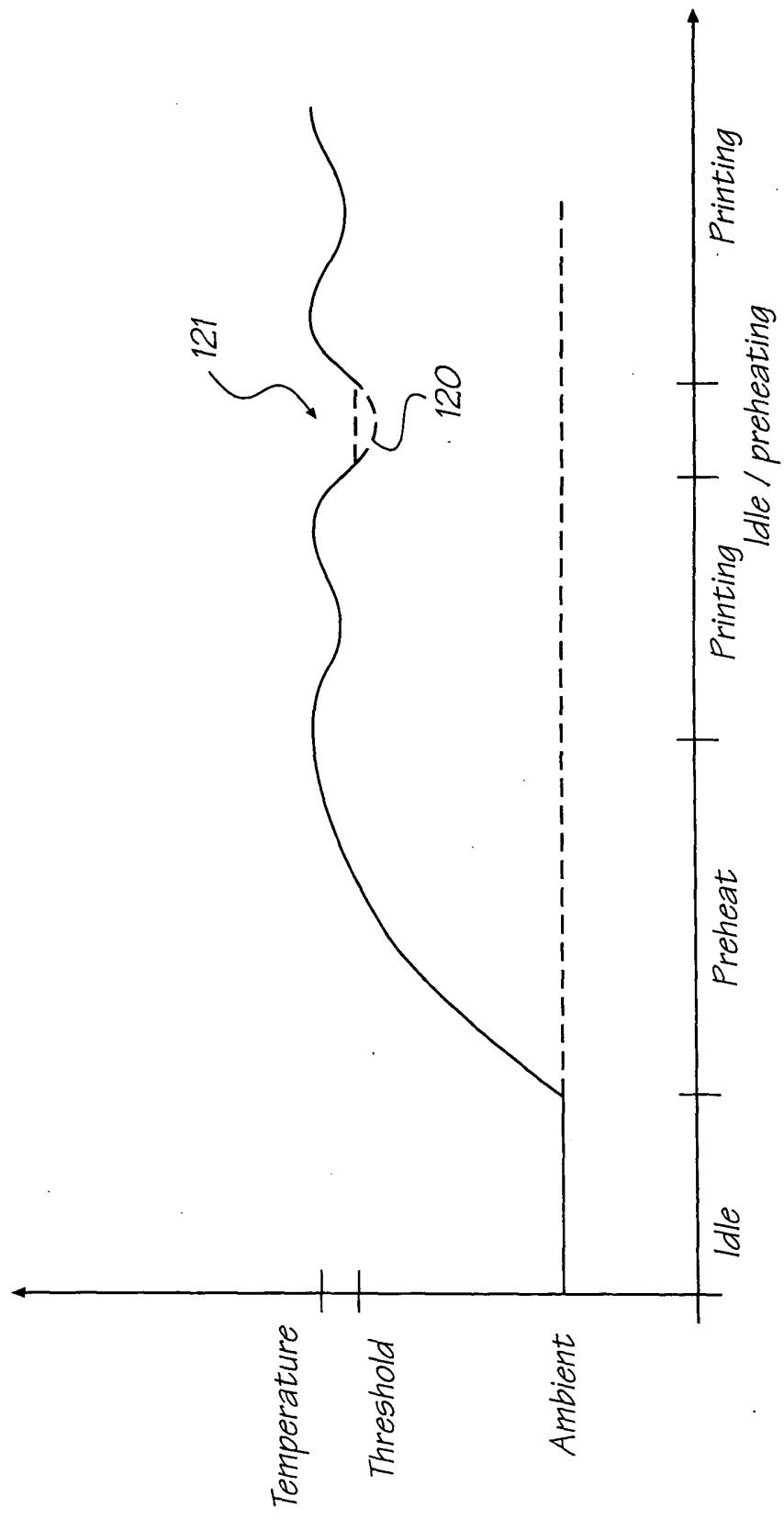


FIG. 16

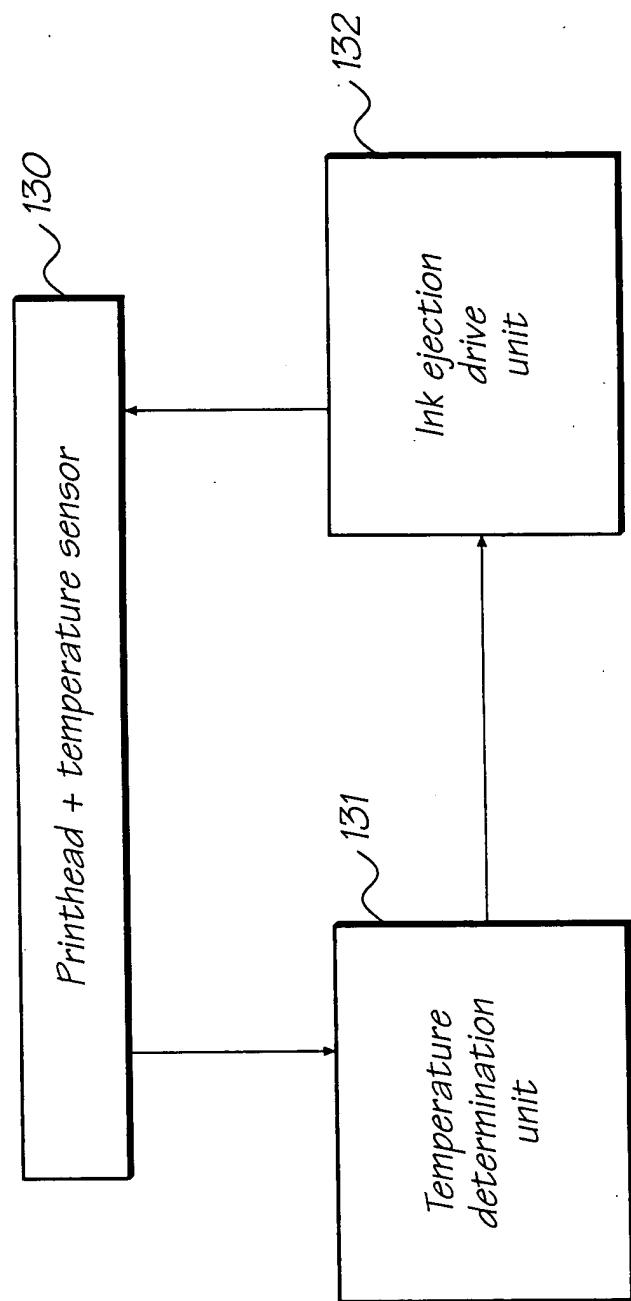


FIG. 17

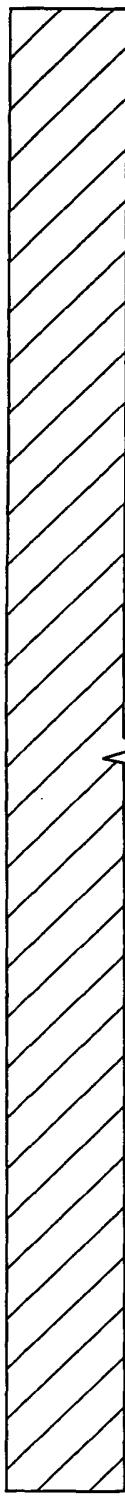


FIG. 18

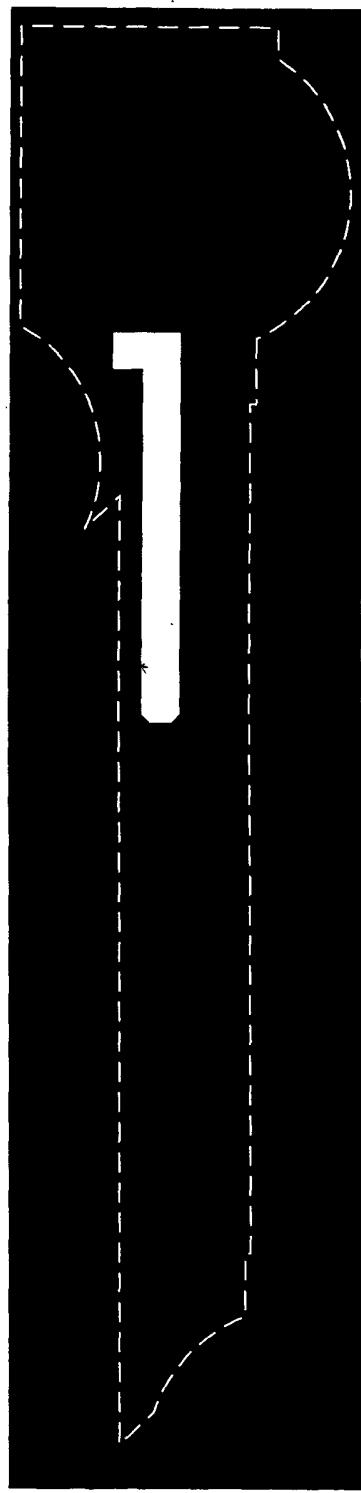


FIG. 19  
N-Well mask

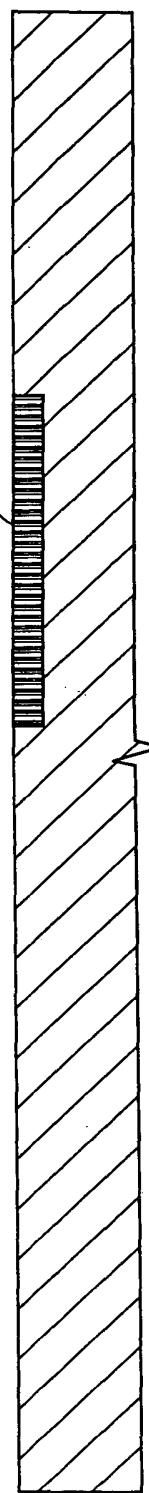


FIG. 20  
Implant N-Well

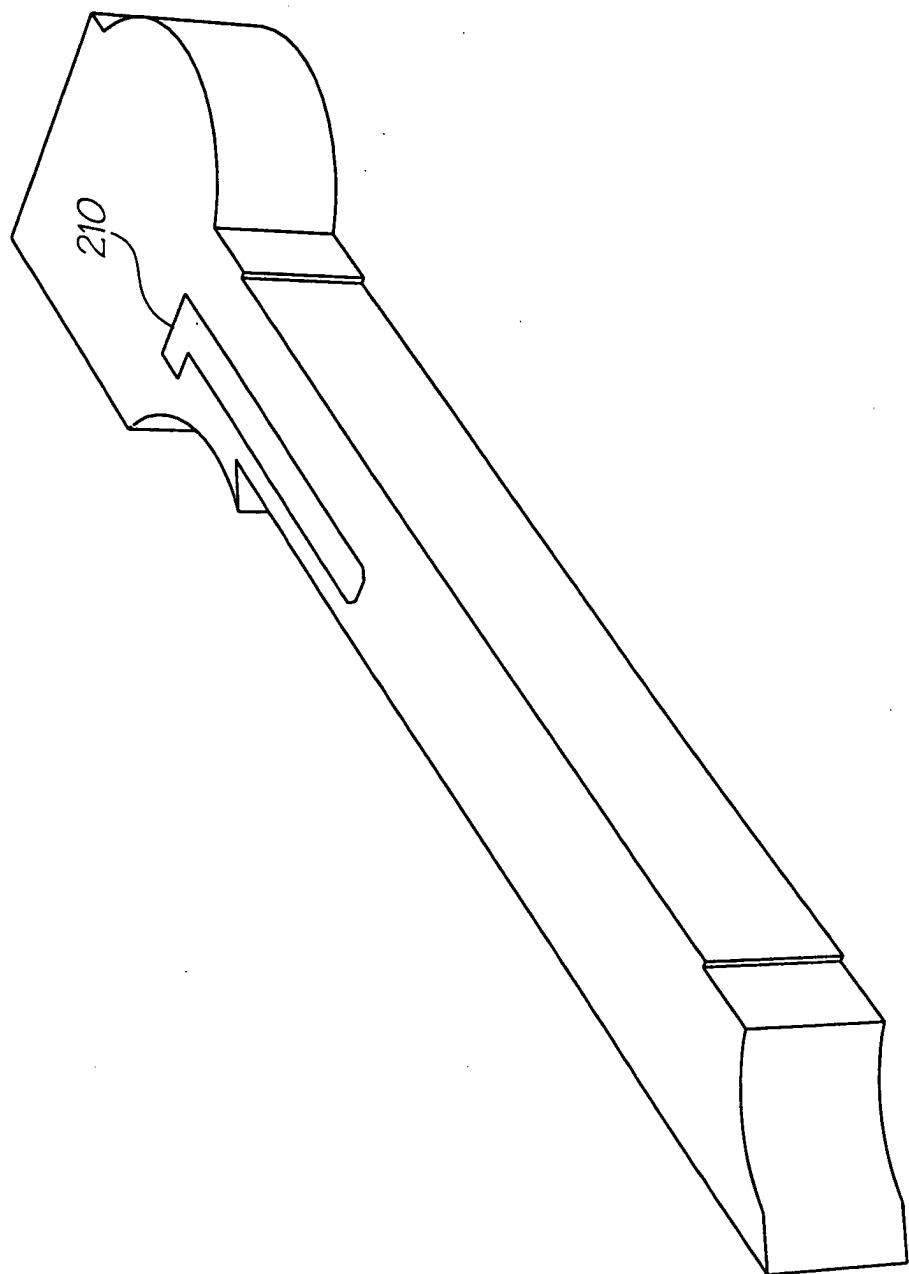
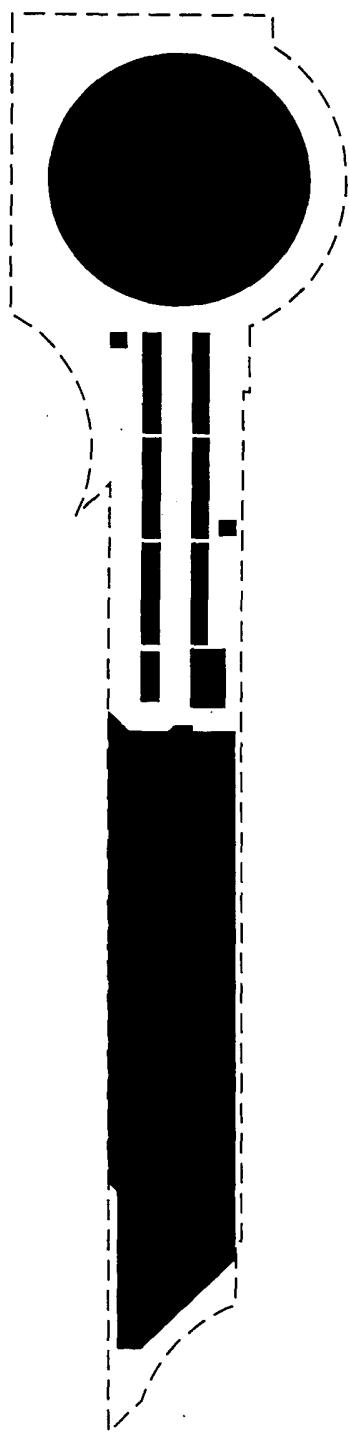
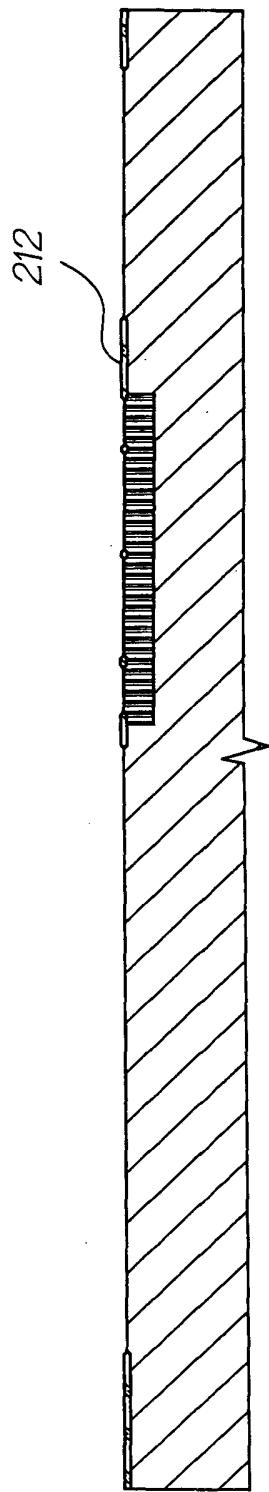


FIG. 21



*Active mask*

*FIG. 22*



*Grow field oxide*

*FIG. 23*

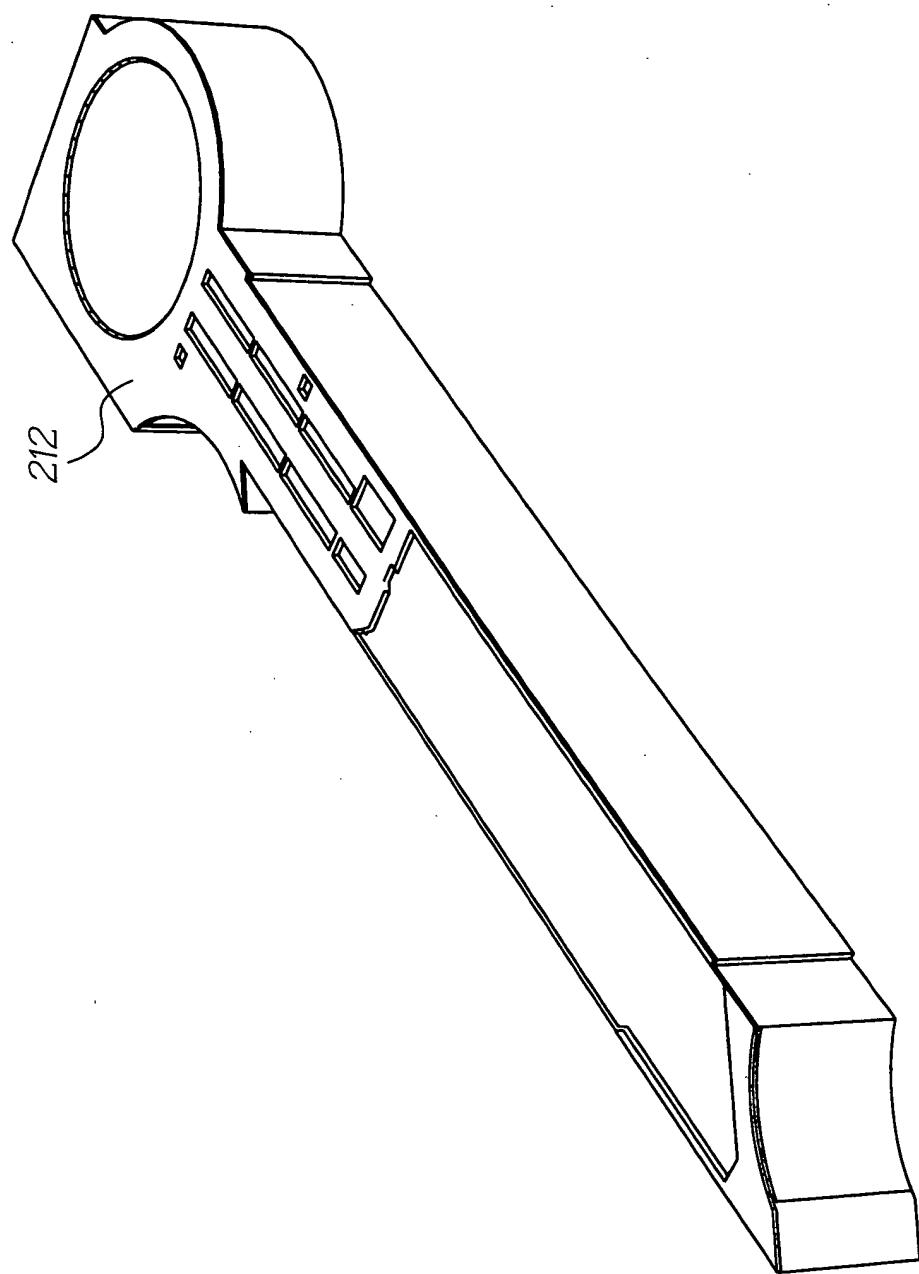
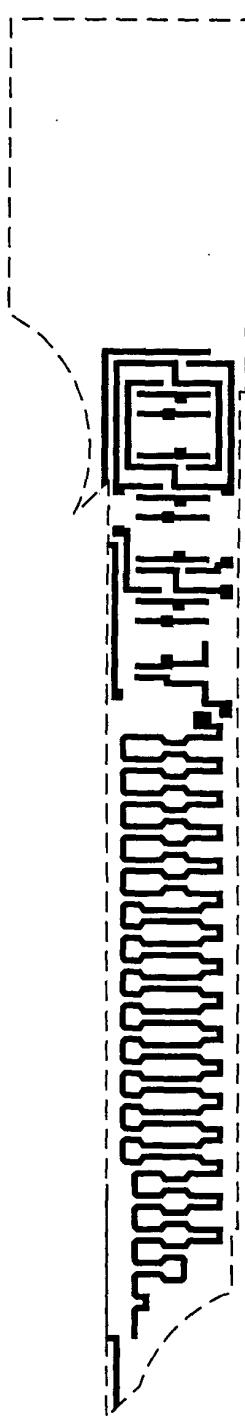
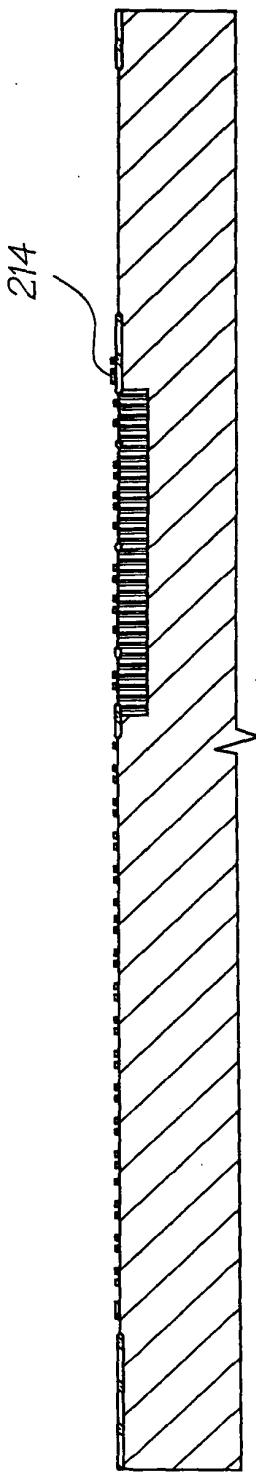


FIG. 24



Poly mask

FIG. 25



Deposit poly

FIG. 26

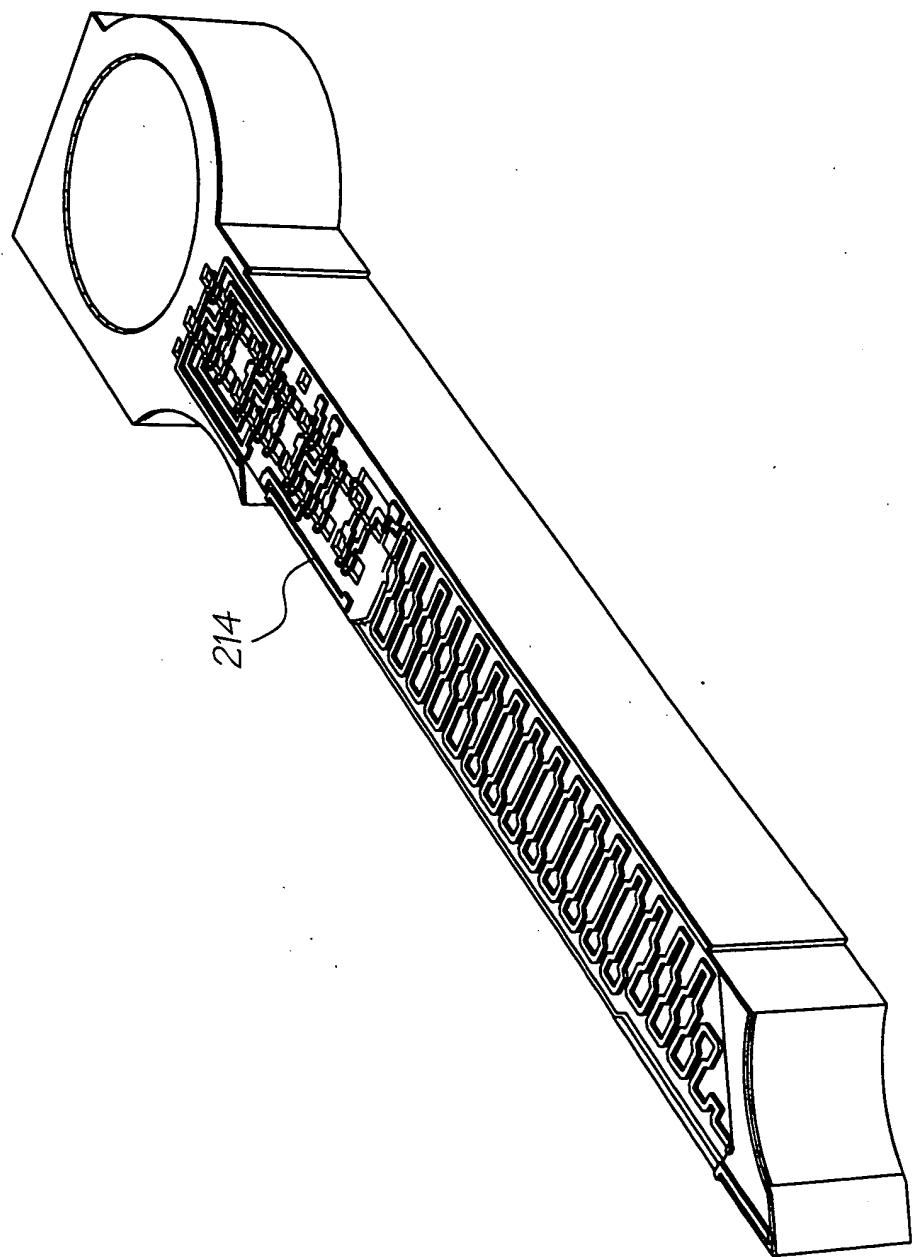
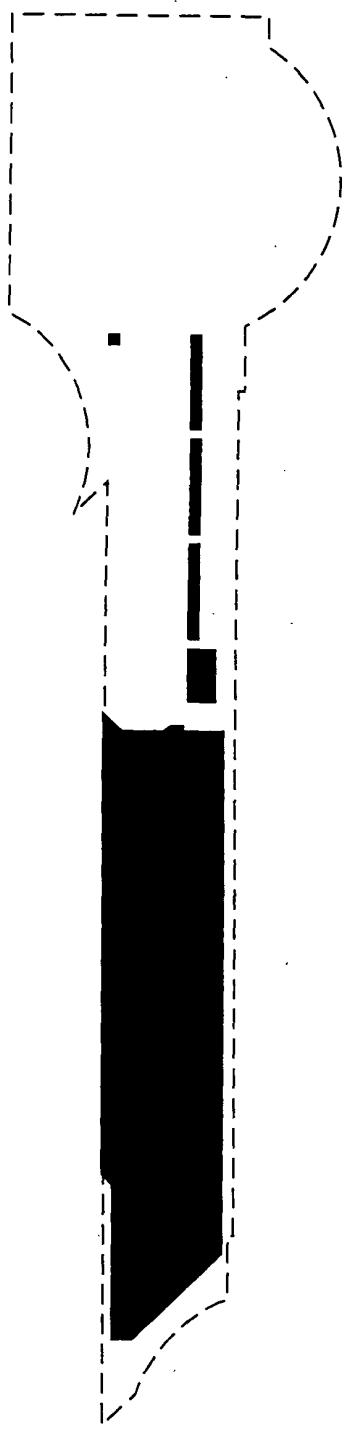
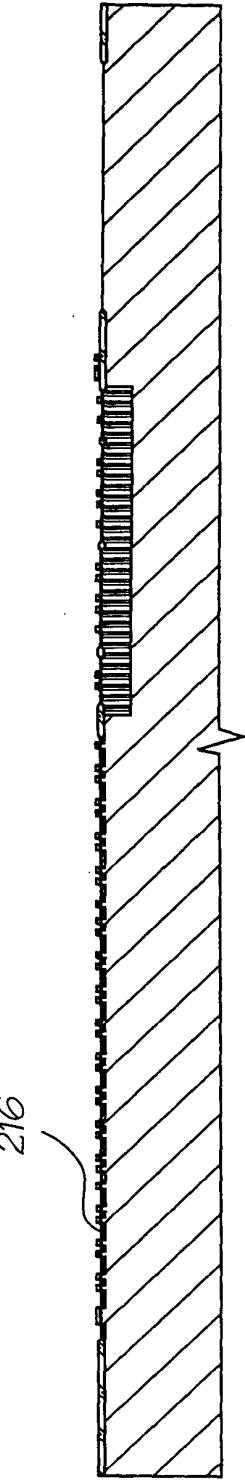


FIG. 27



$n+$  mask

FIG. 28



$n+$  implant

FIG. 29

18/76

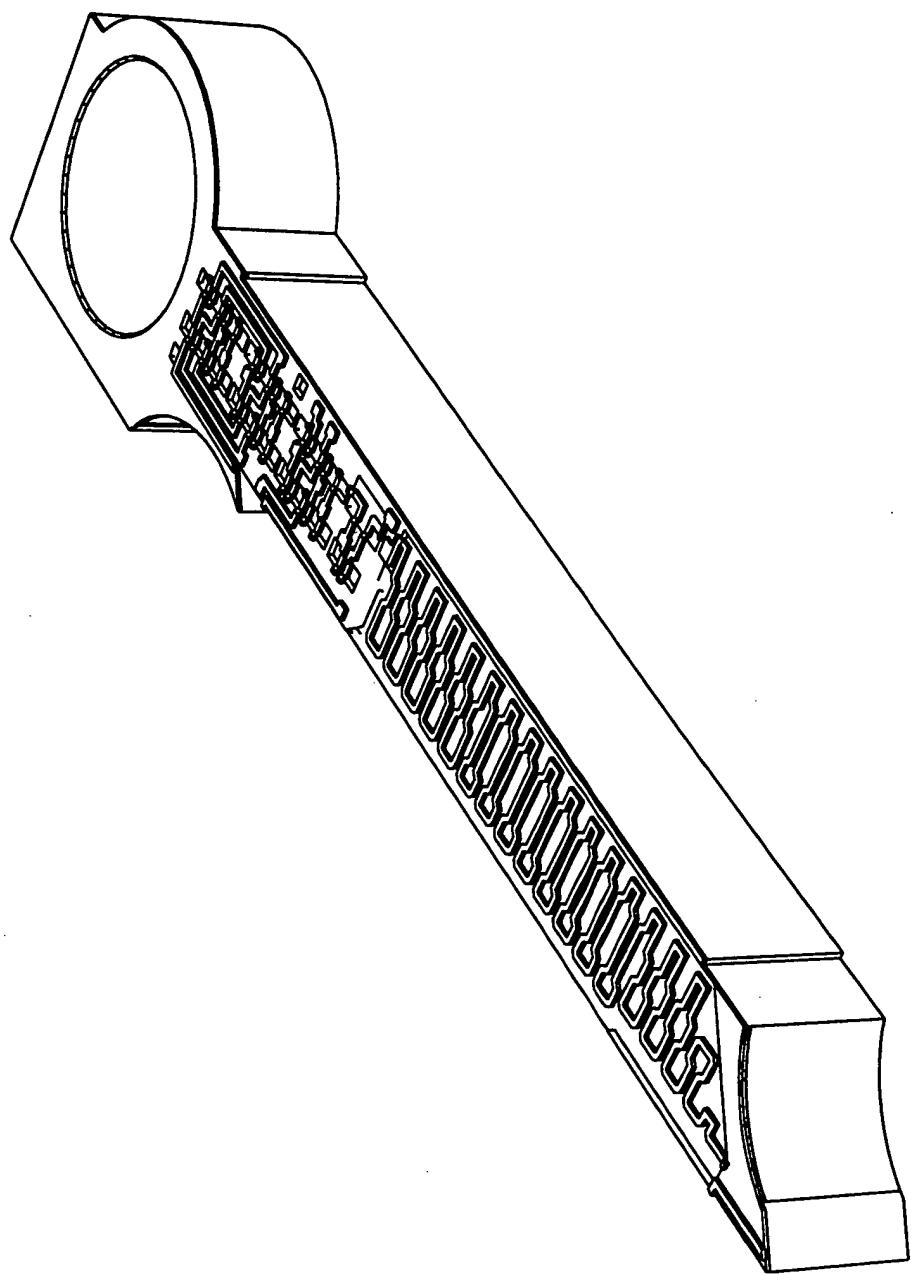


FIG. 30

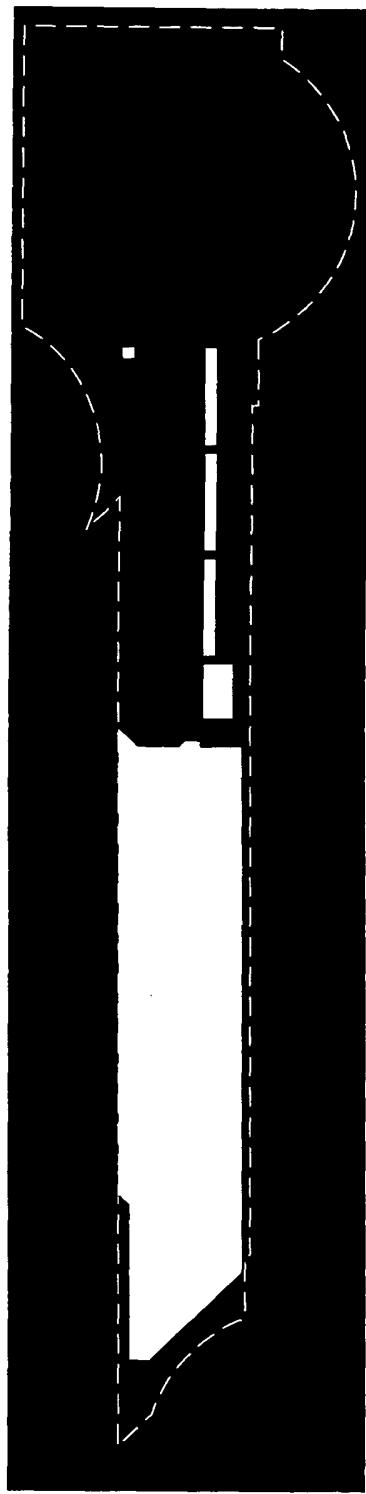


FIG. 31

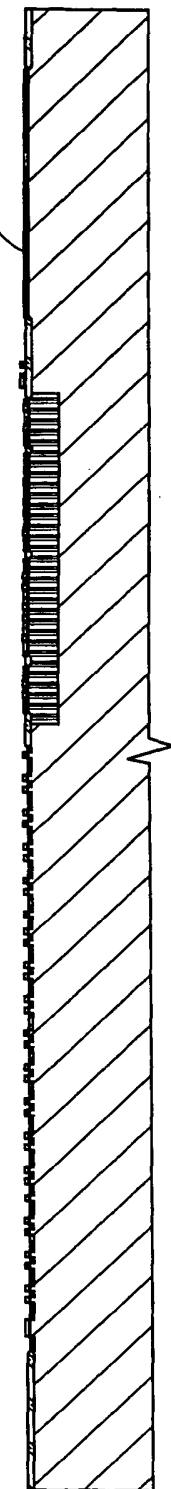


FIG. 32

20/76

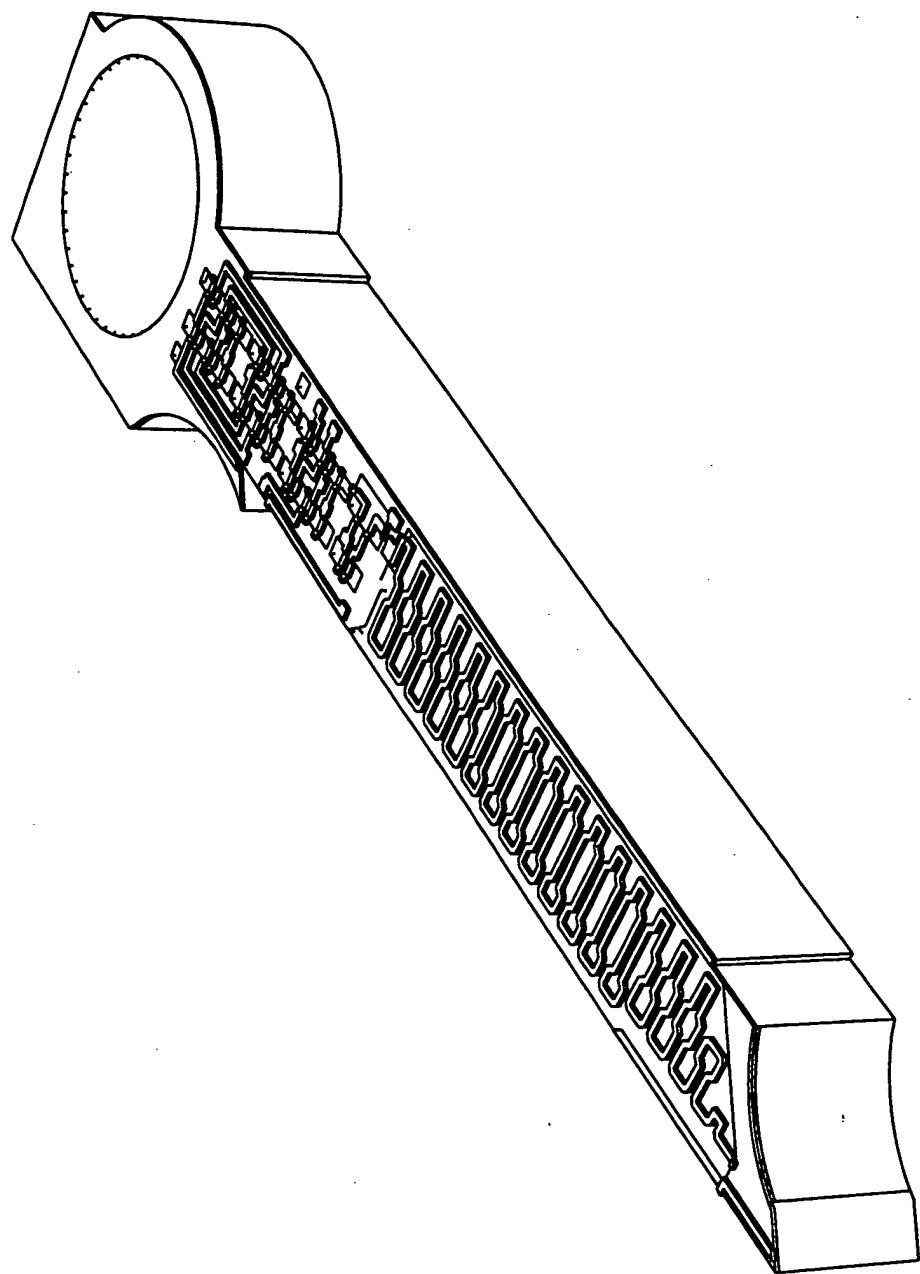


FIG. 33

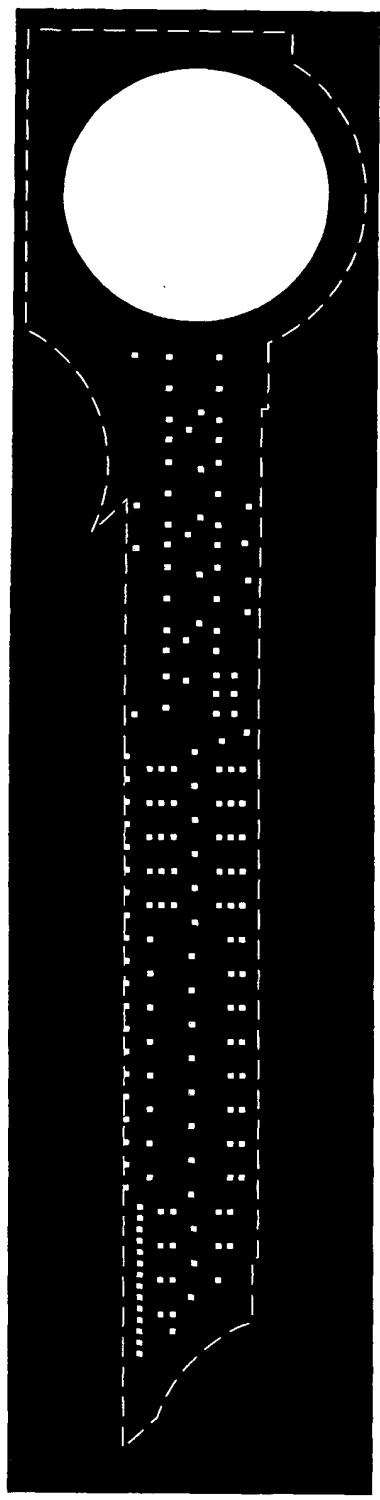


FIG. 34

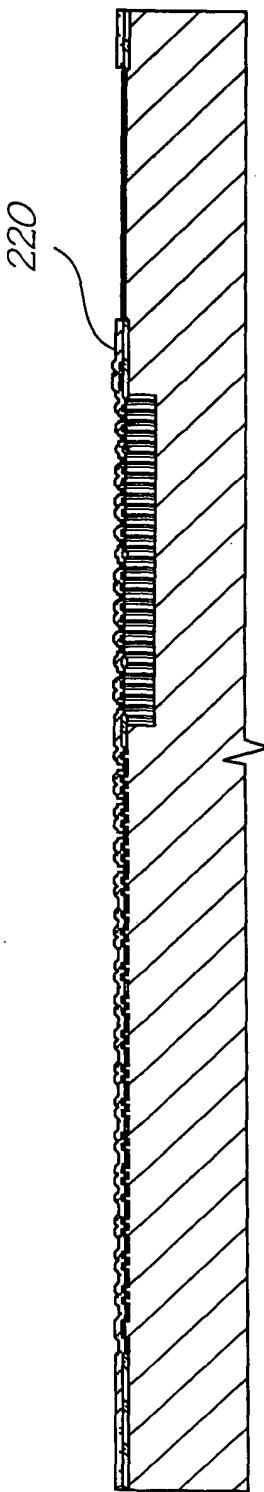


FIG. 35

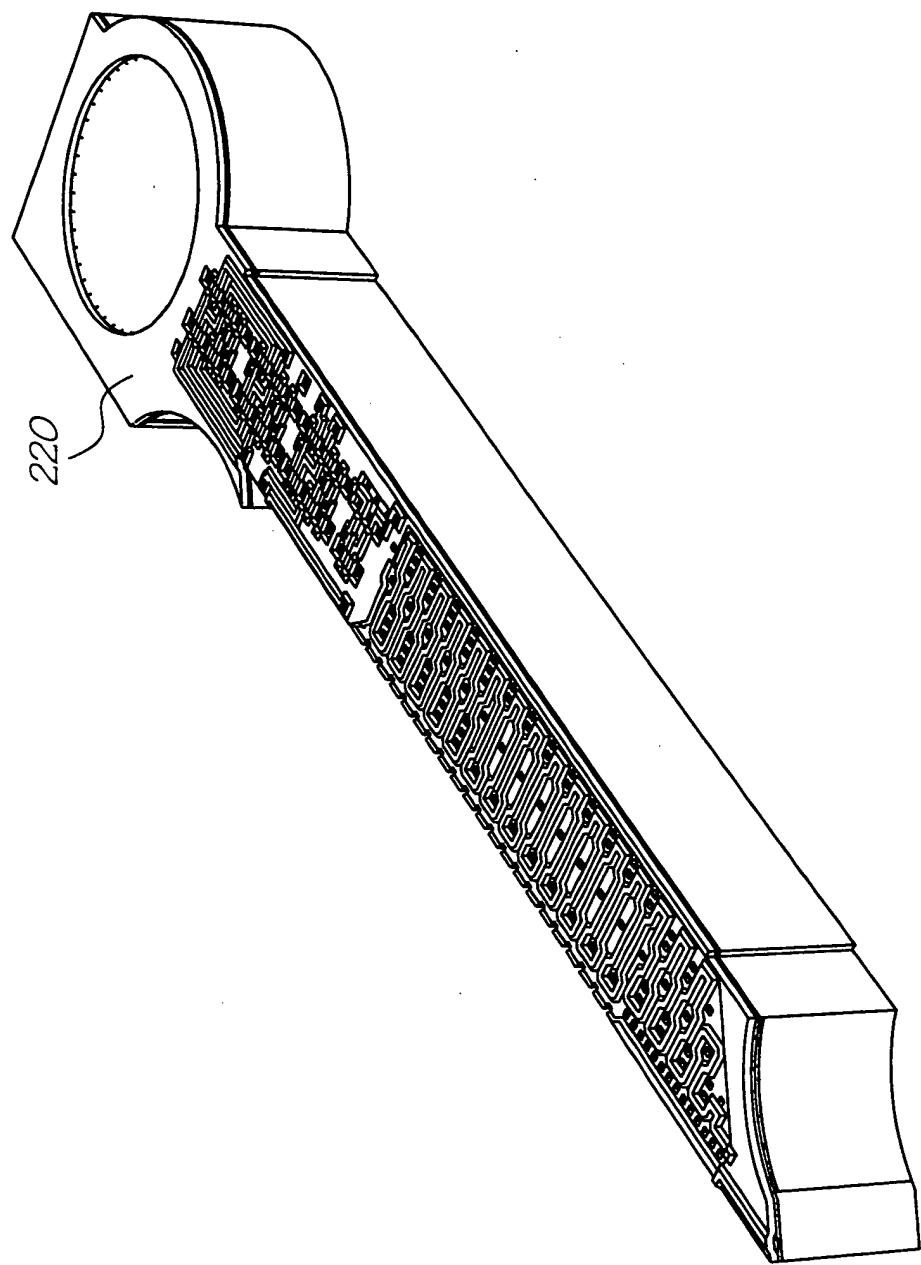
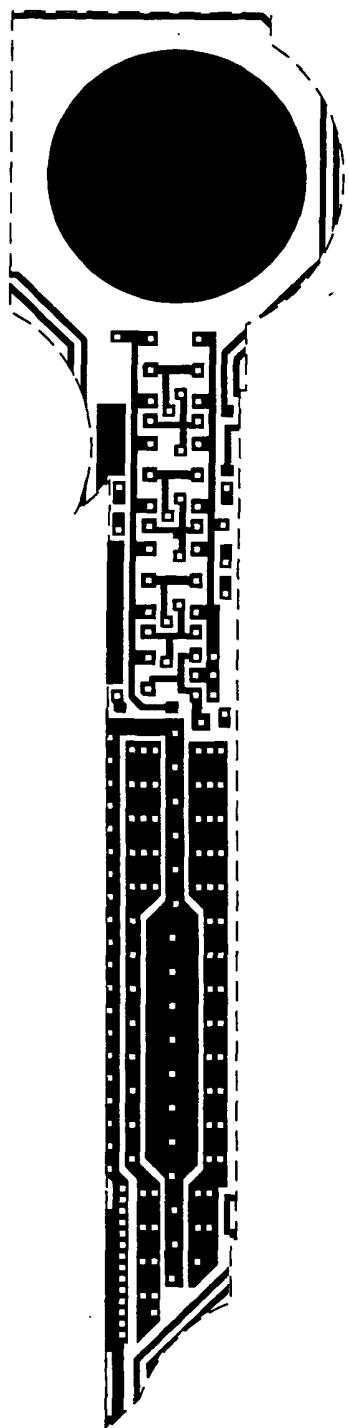
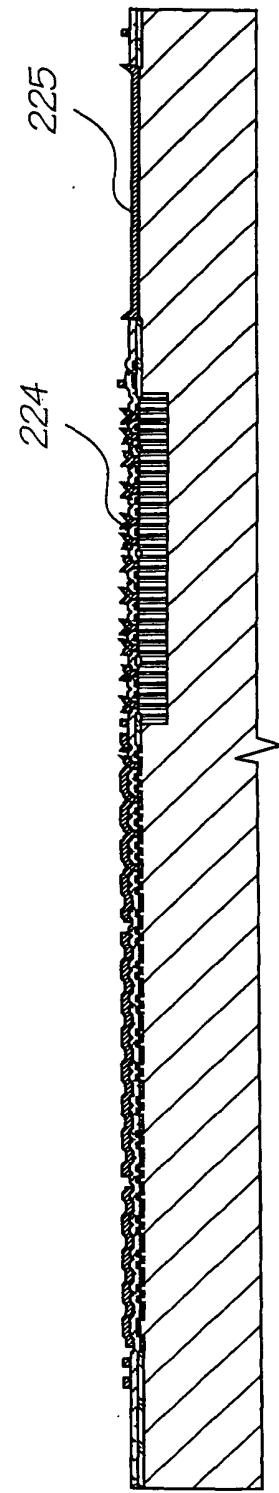


FIG. 36



Metal 1 mask

FIG. 37



Deposit Metal 1

FIG. 38

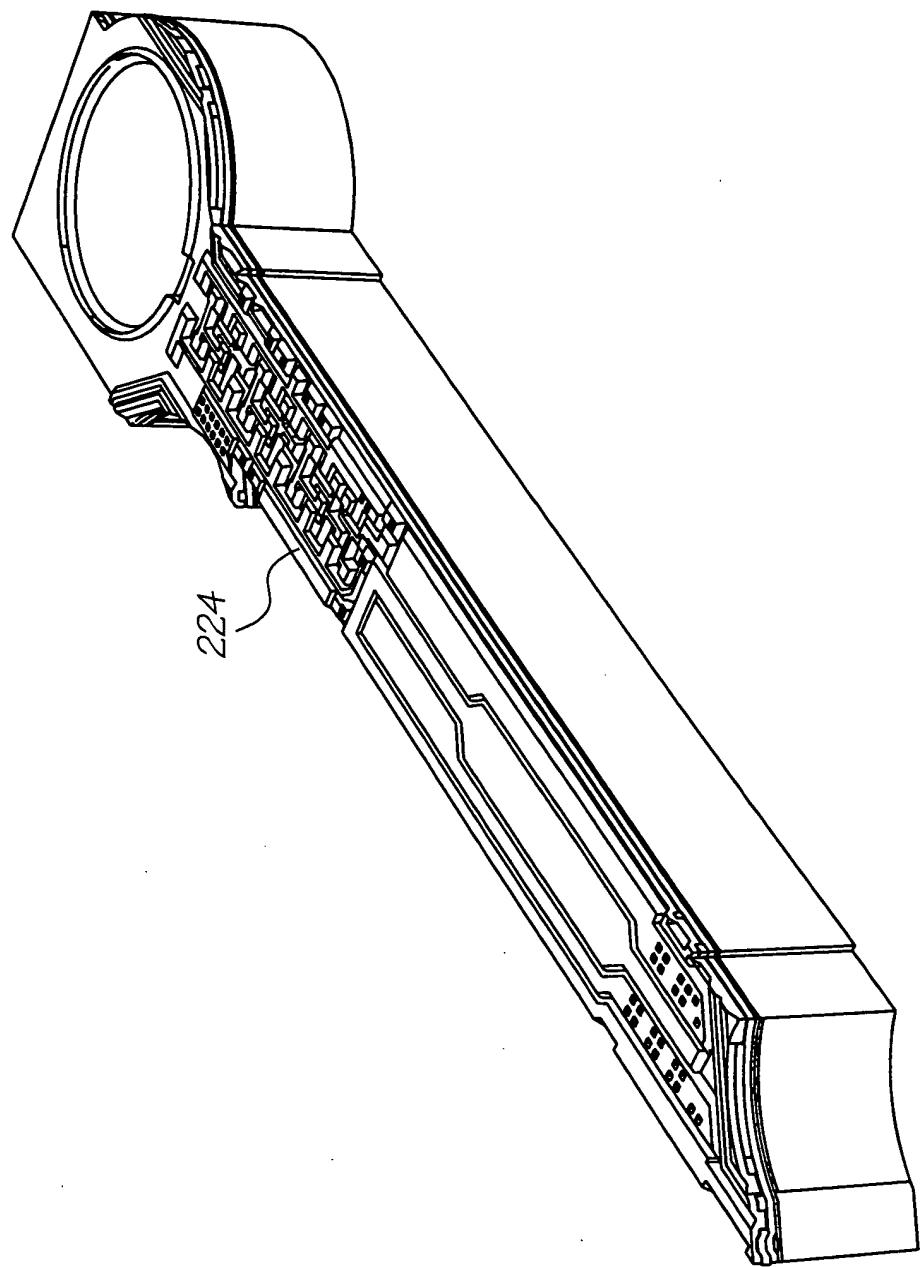
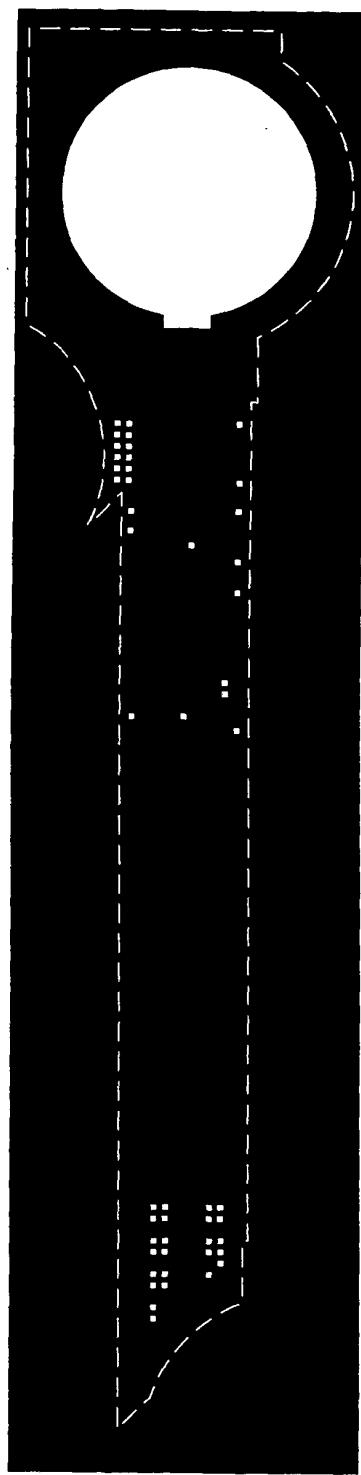
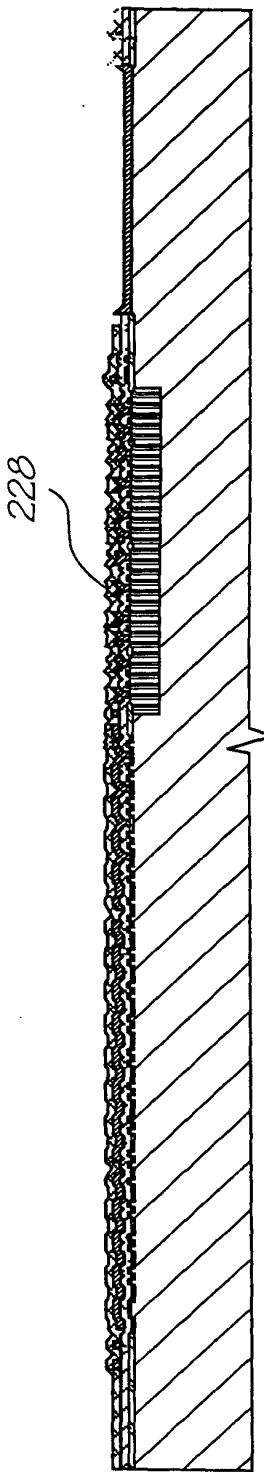


FIG. 39



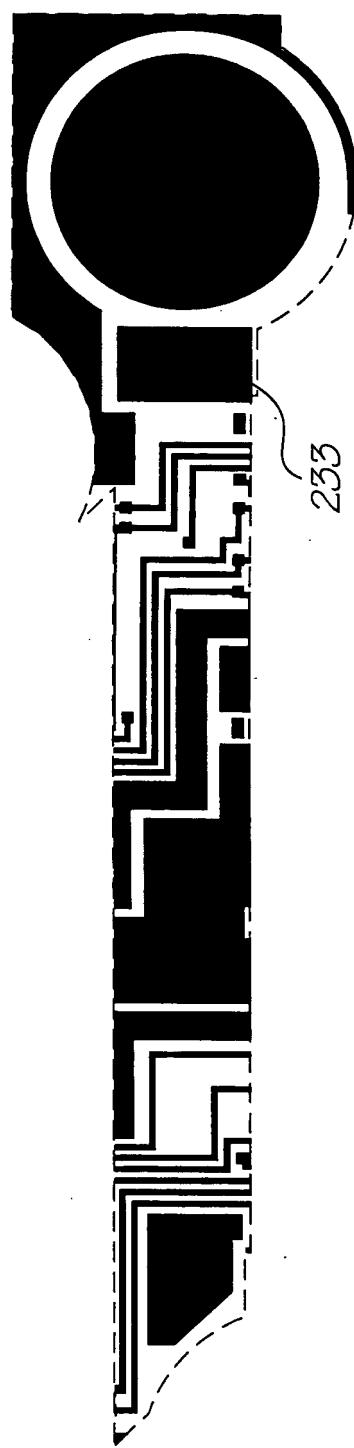
Via 1 mask

FIG. 40



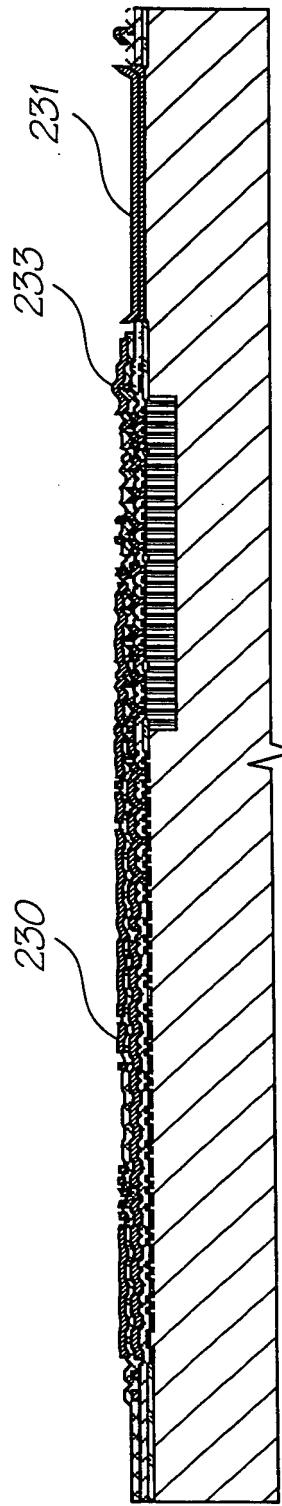
Deposit ILD 2, etch vias

FIG. 41



Metal 2 mask

FIG. 42



Deposit metal 2

FIG. 43

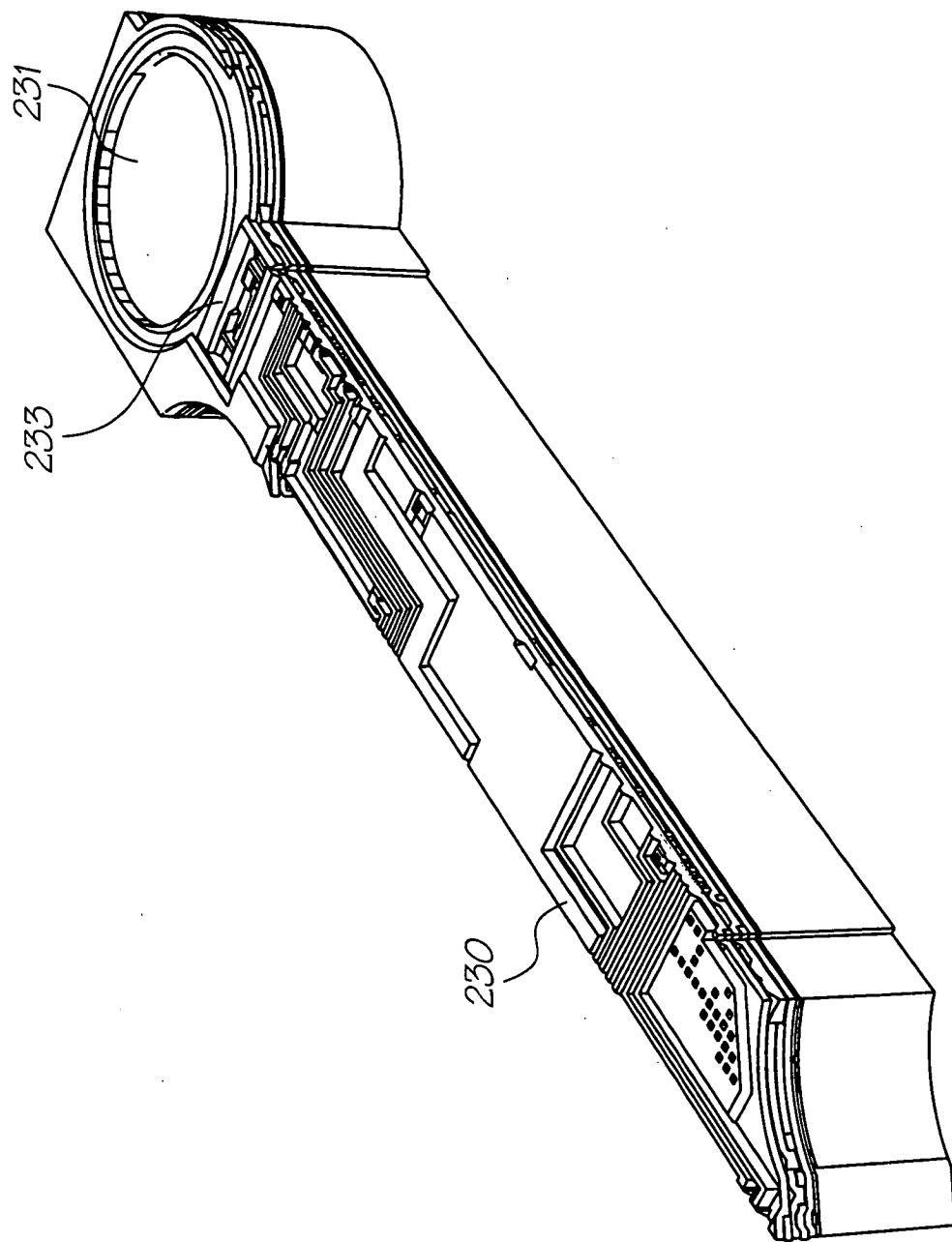
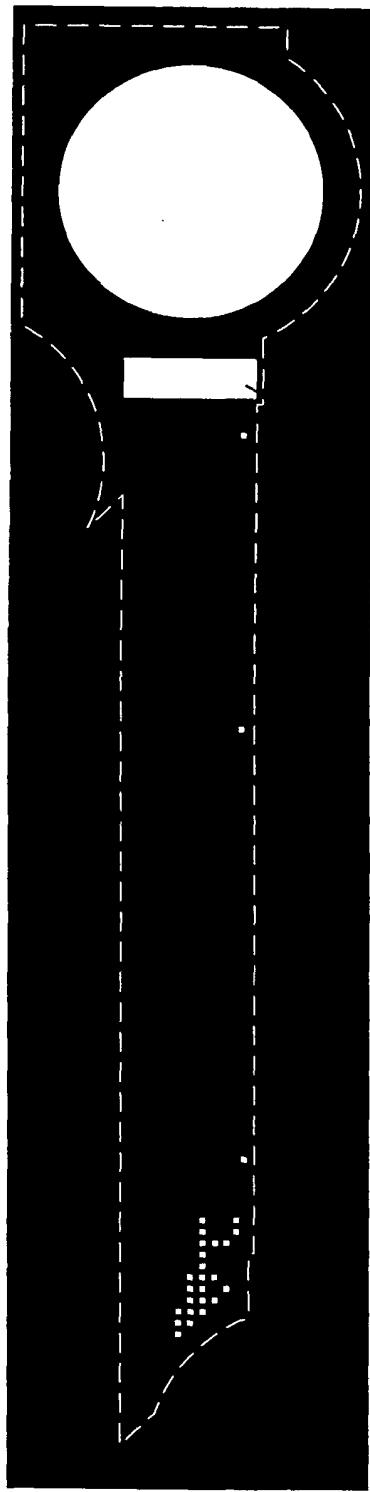
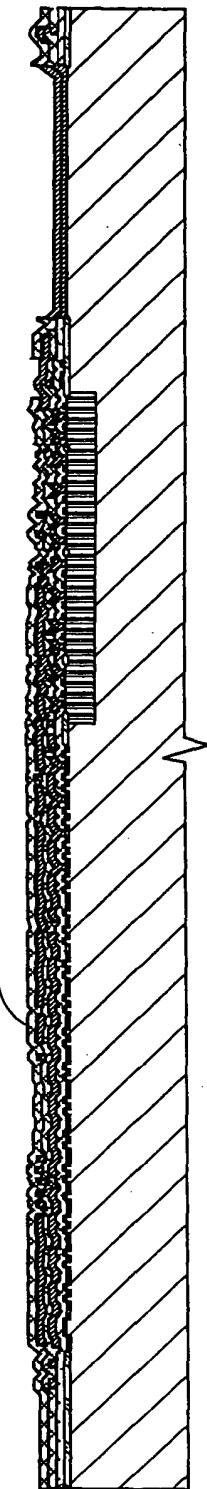


FIG. 44



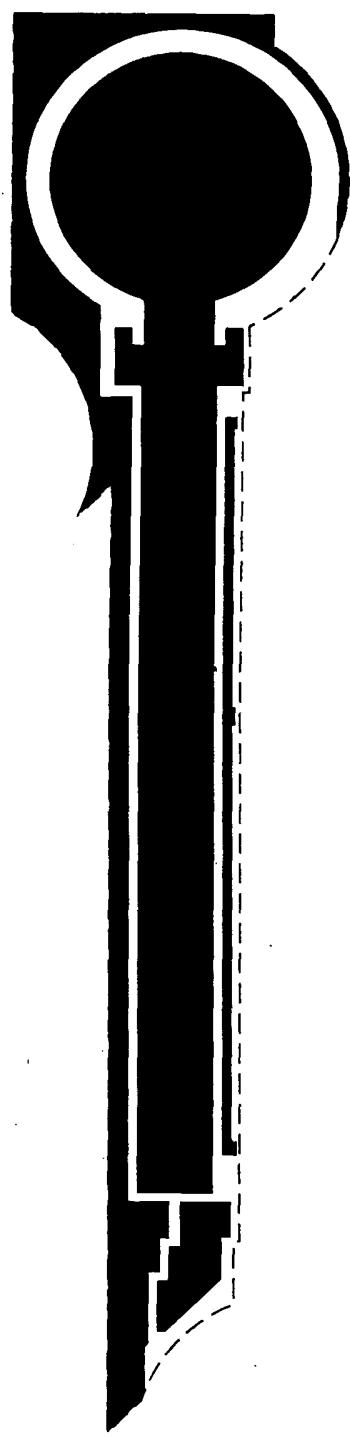
Via 2 mask

FIG. 45



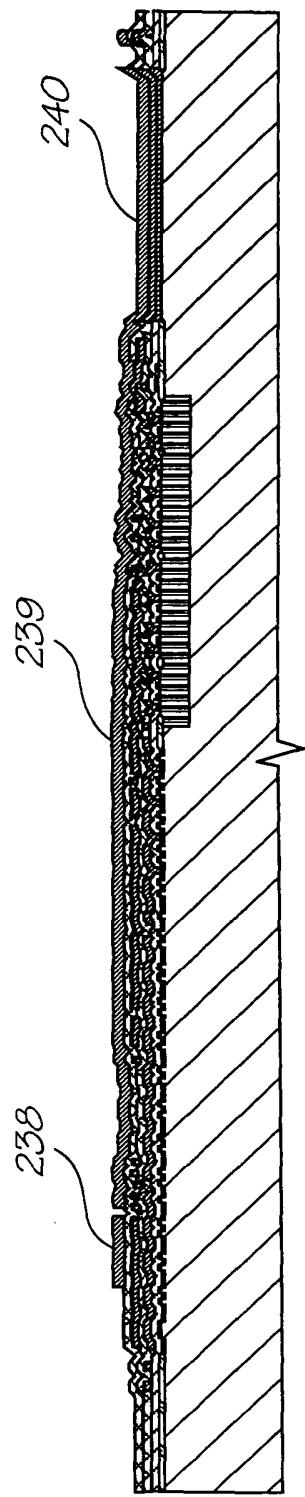
Deposit ILD 3, etch vias

FIG. 46



Metal 3 mask

FIG. 47



Deposit metal 3

FIG. 48

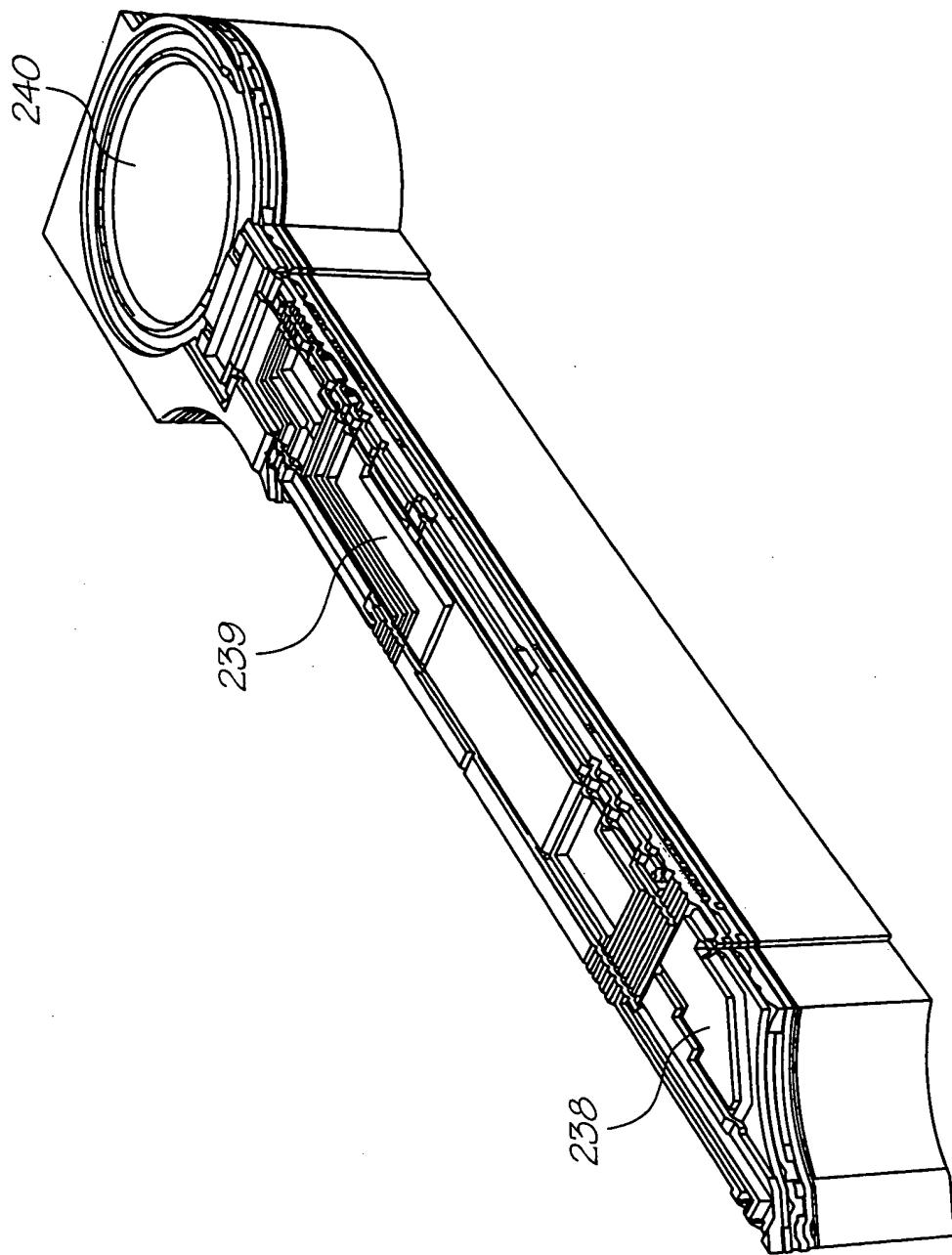
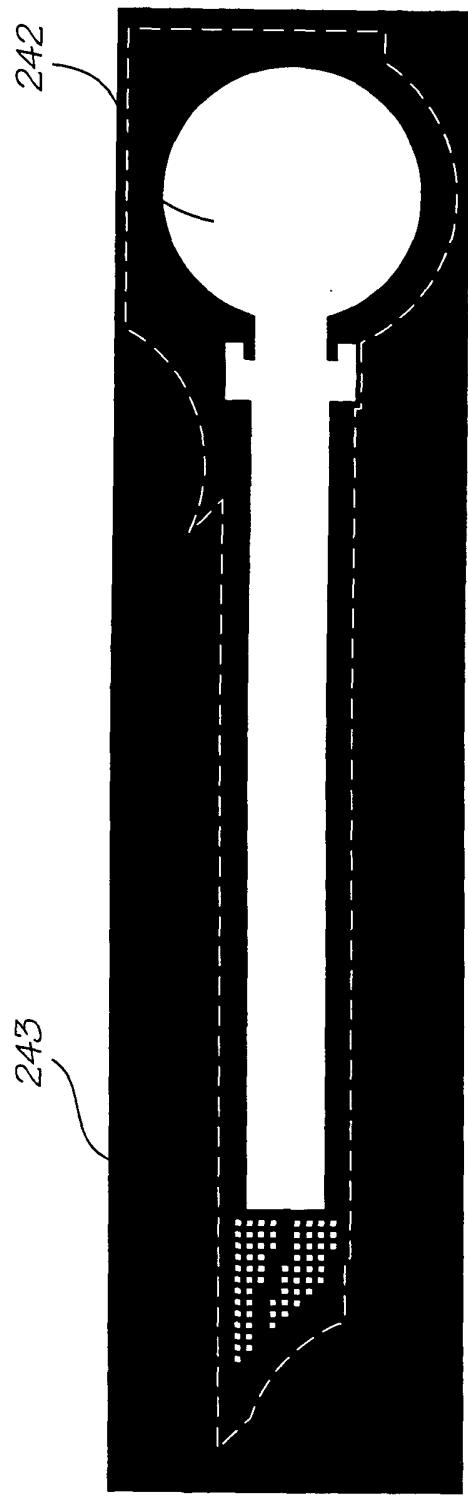
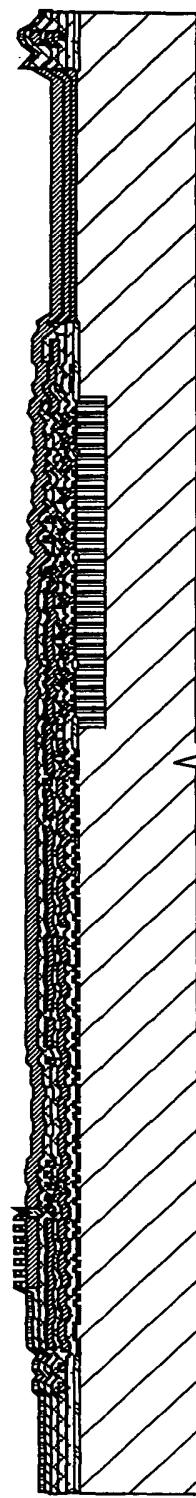


FIG. 49



Via 3 / Passivation mask

FIG. 50



Deposit passivation oxide & nitride, etch vias

FIG. 51

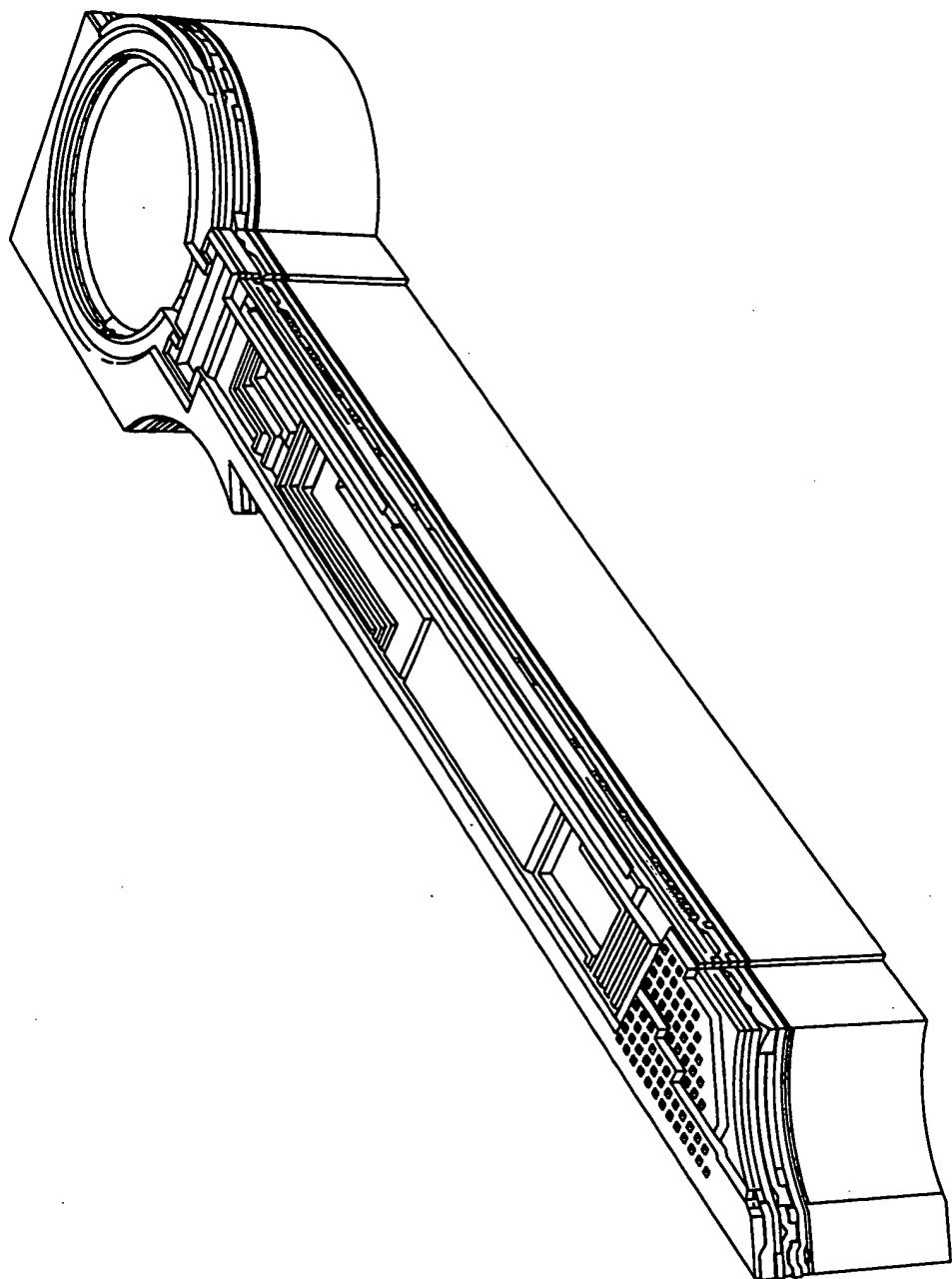
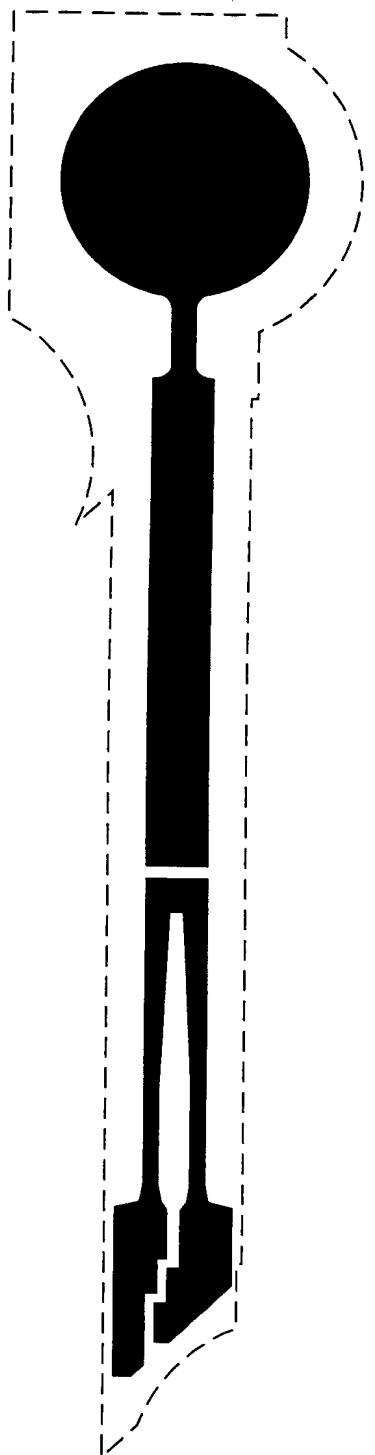
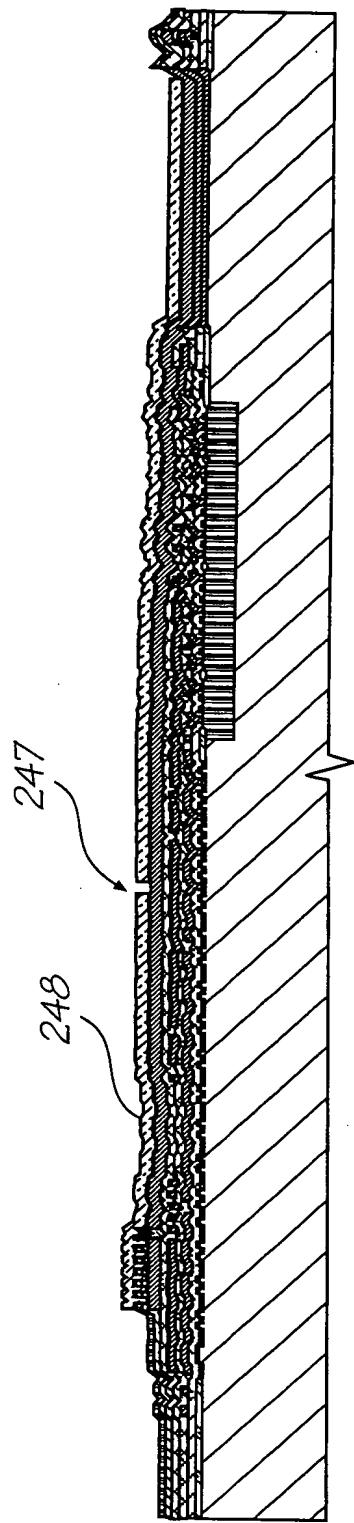


FIG. 52



Heater mask

FIG. 53



Deposit heater TiN

FIG. 54

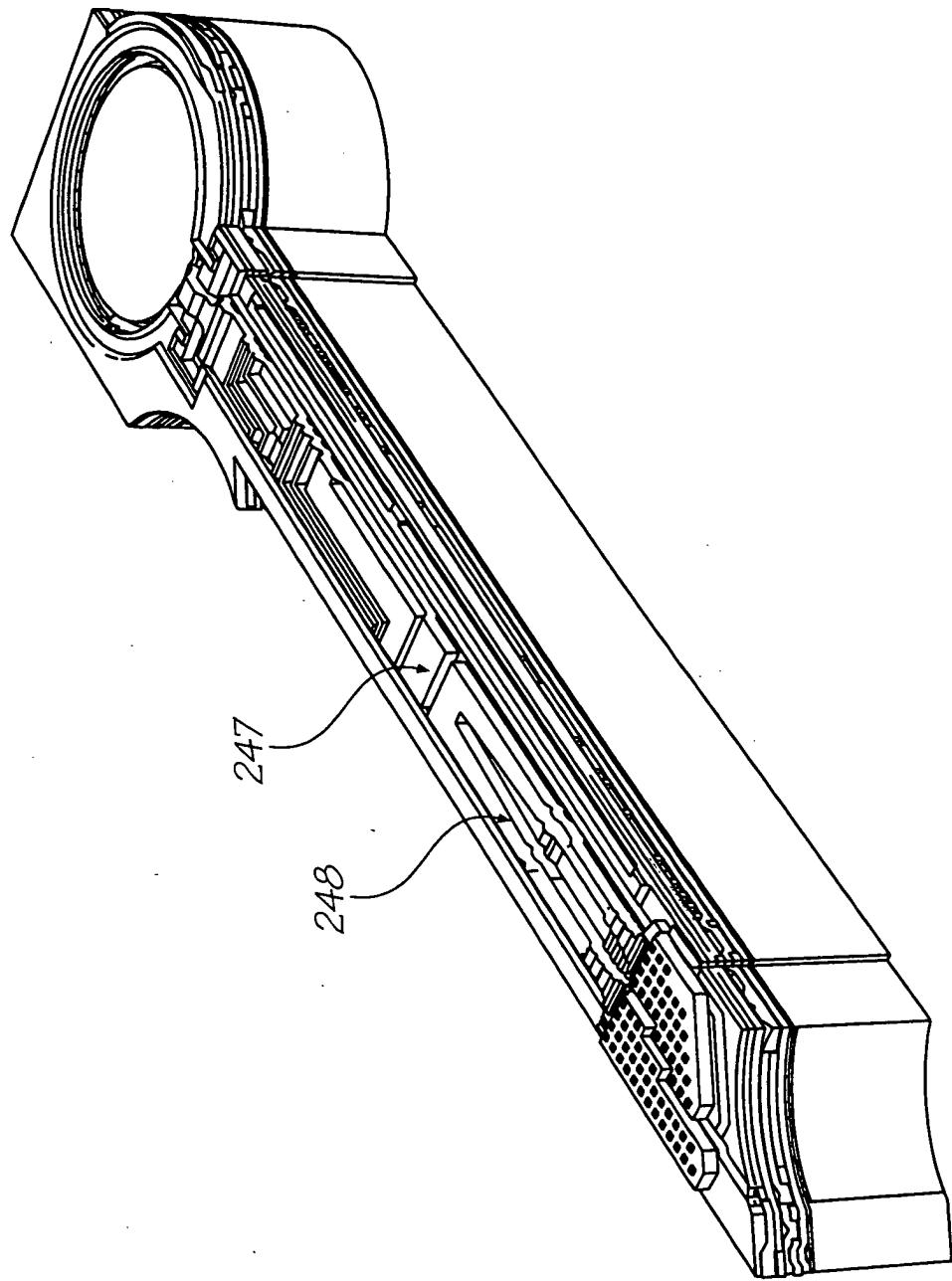
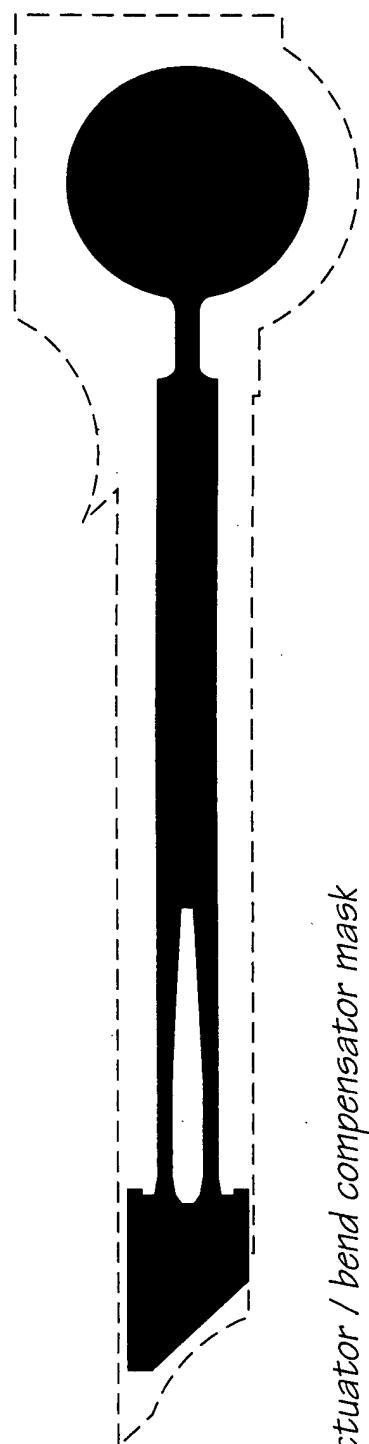
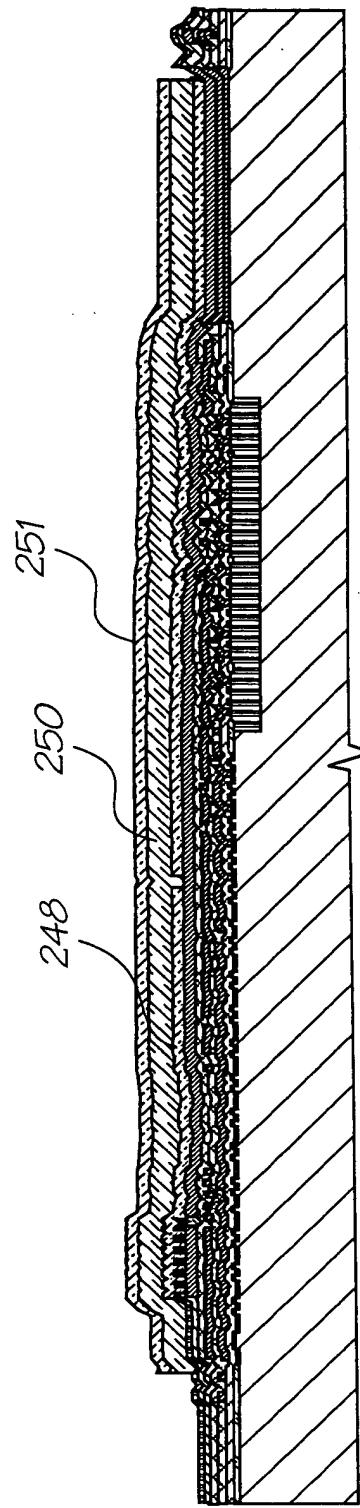


FIG. 55



Actuator / bend compensator mask

FIG. 56



Deposit actuator glass and bend compensator TiN, etch together

FIG. 57

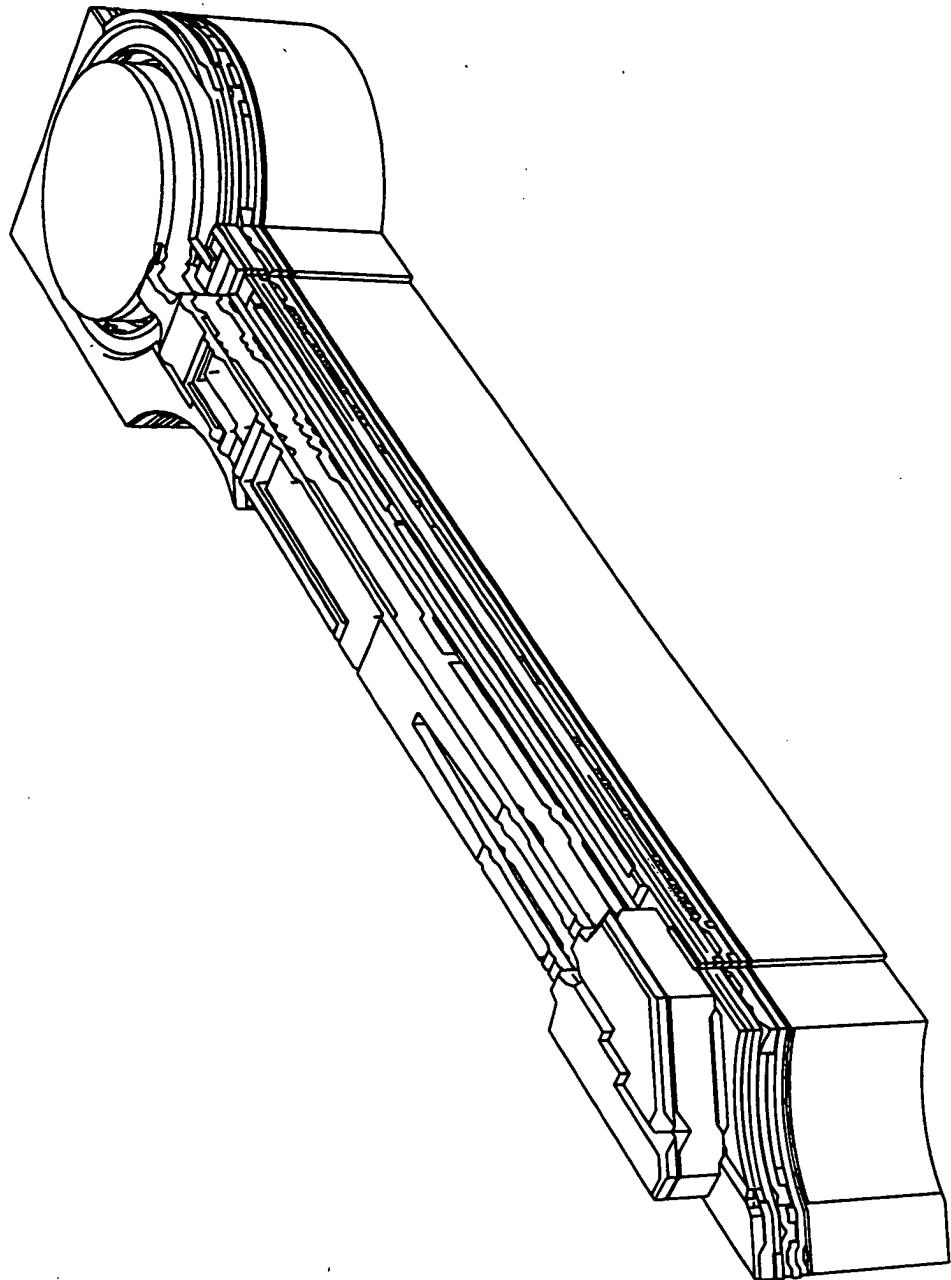
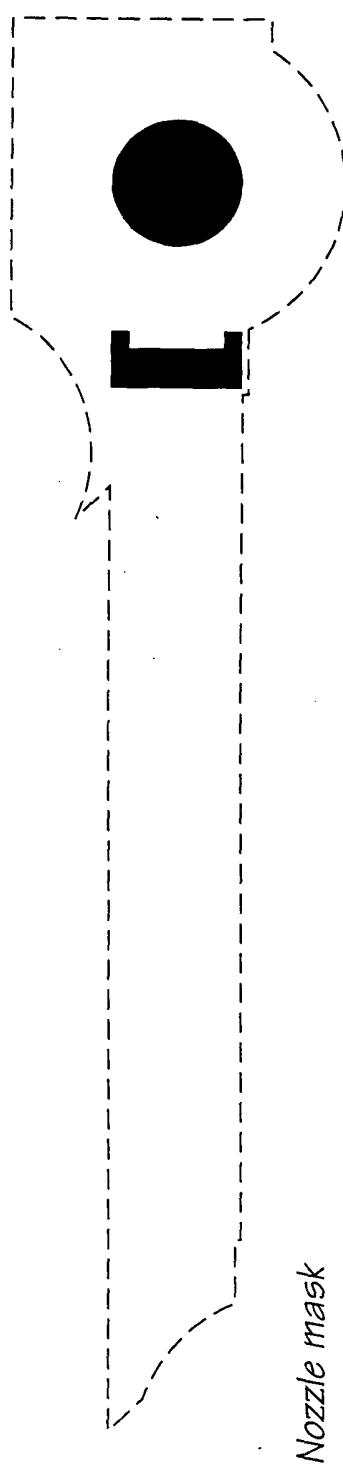
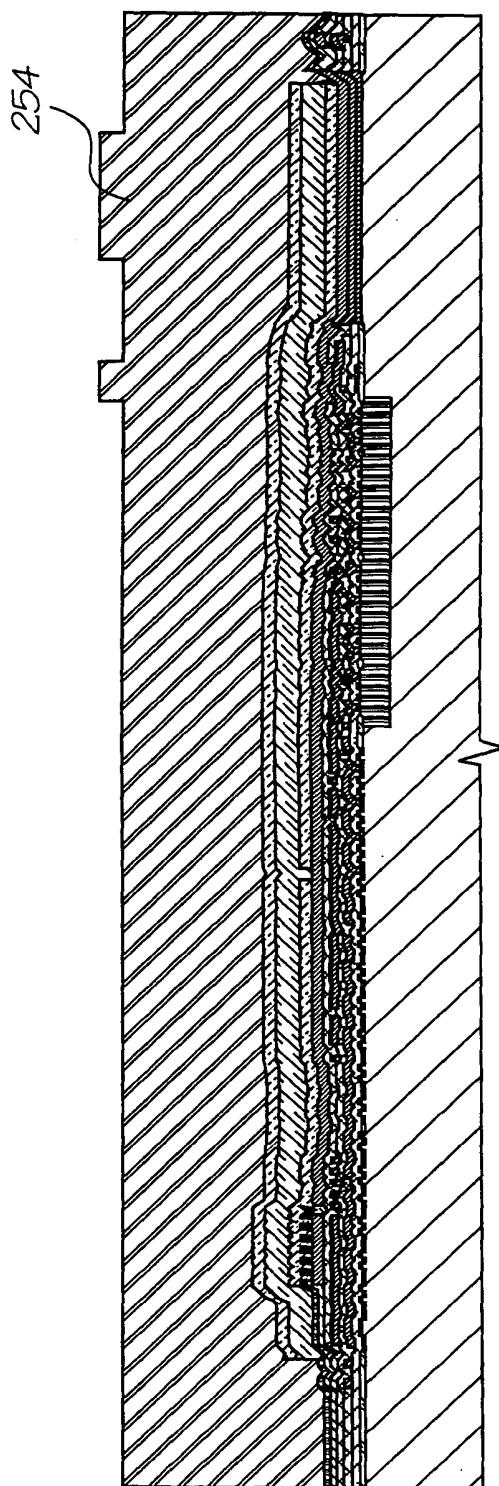


FIG. 58



Nozzle mask

FIG. 59



Deposit sacrificial layer, etch nozzles

FIG. 60

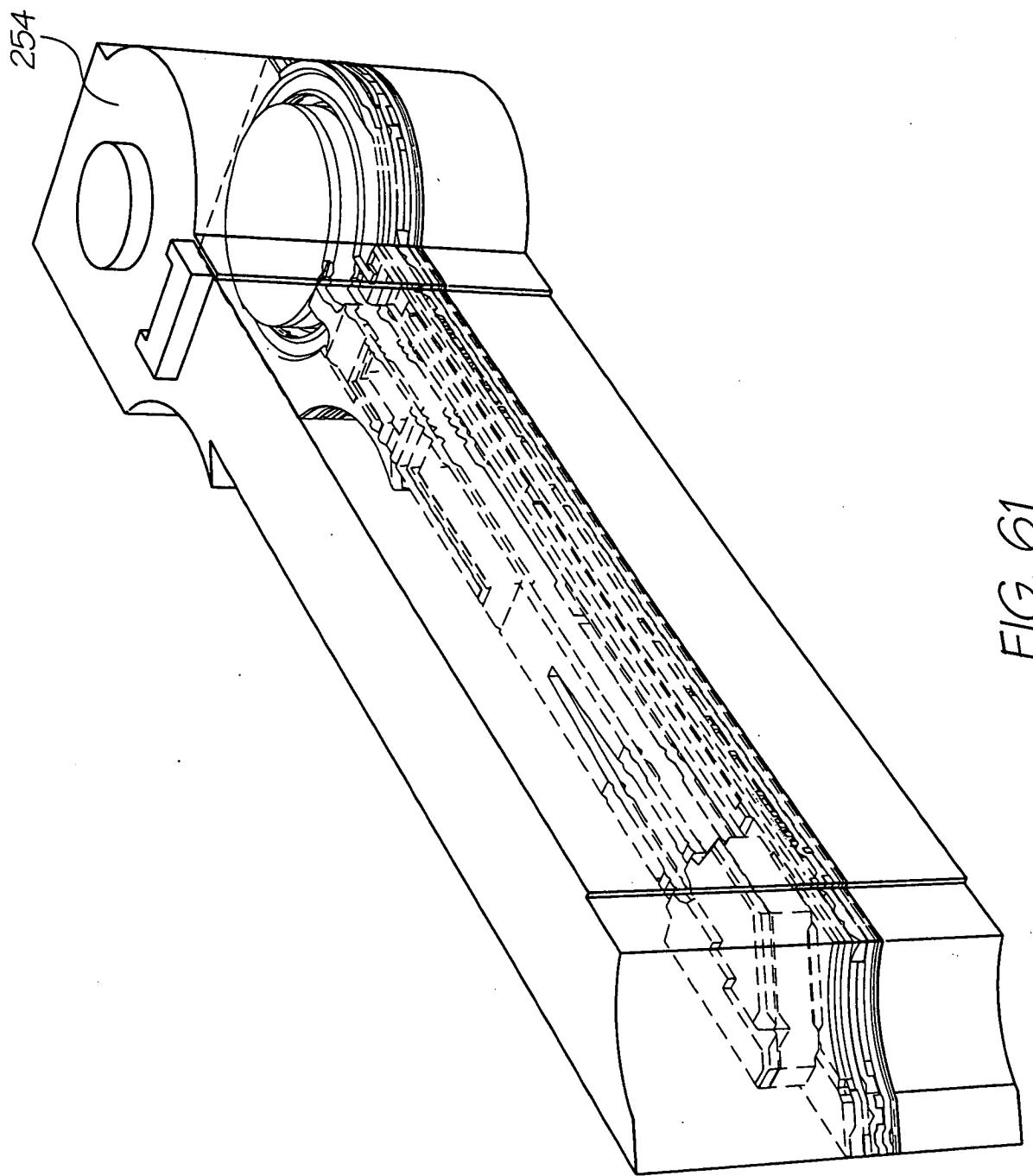
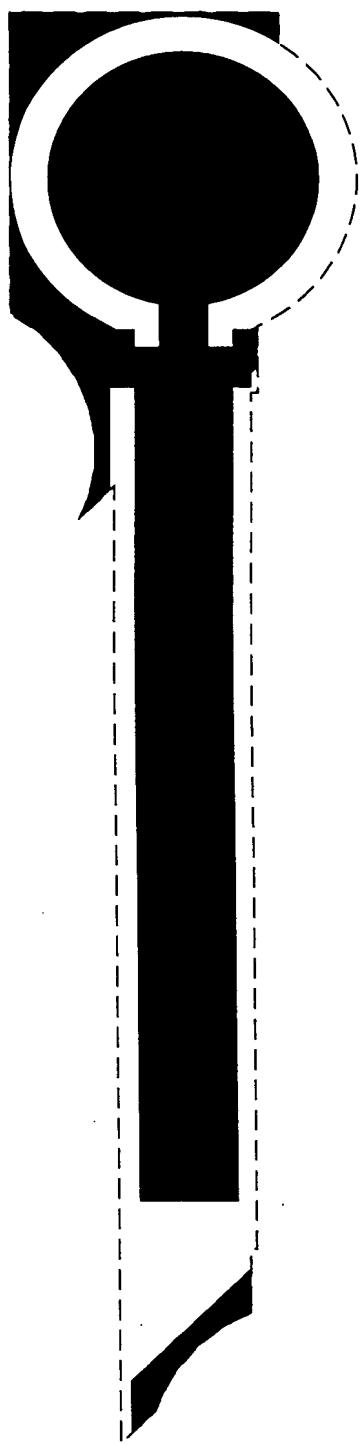
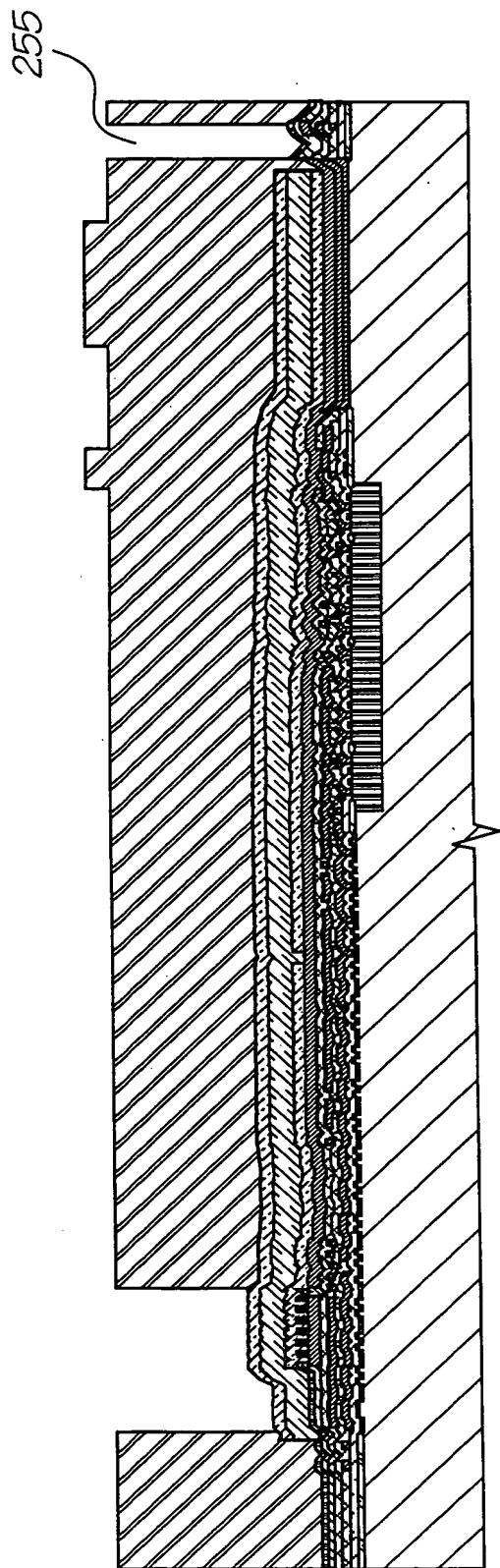


FIG. 61



Chamber mask

FIG. 62



Etch chambers in sacrificial layer

FIG. 63

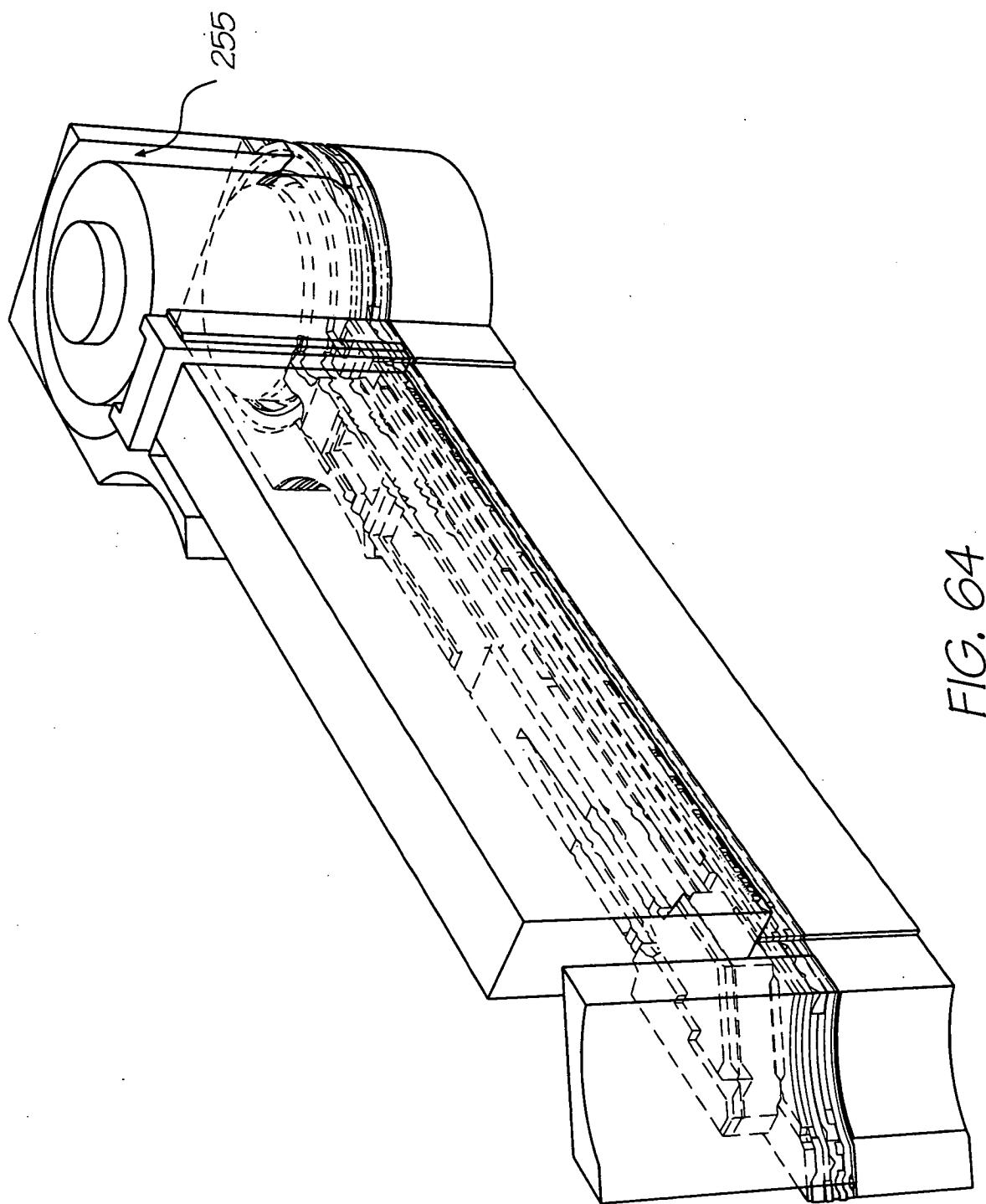


FIG. 64

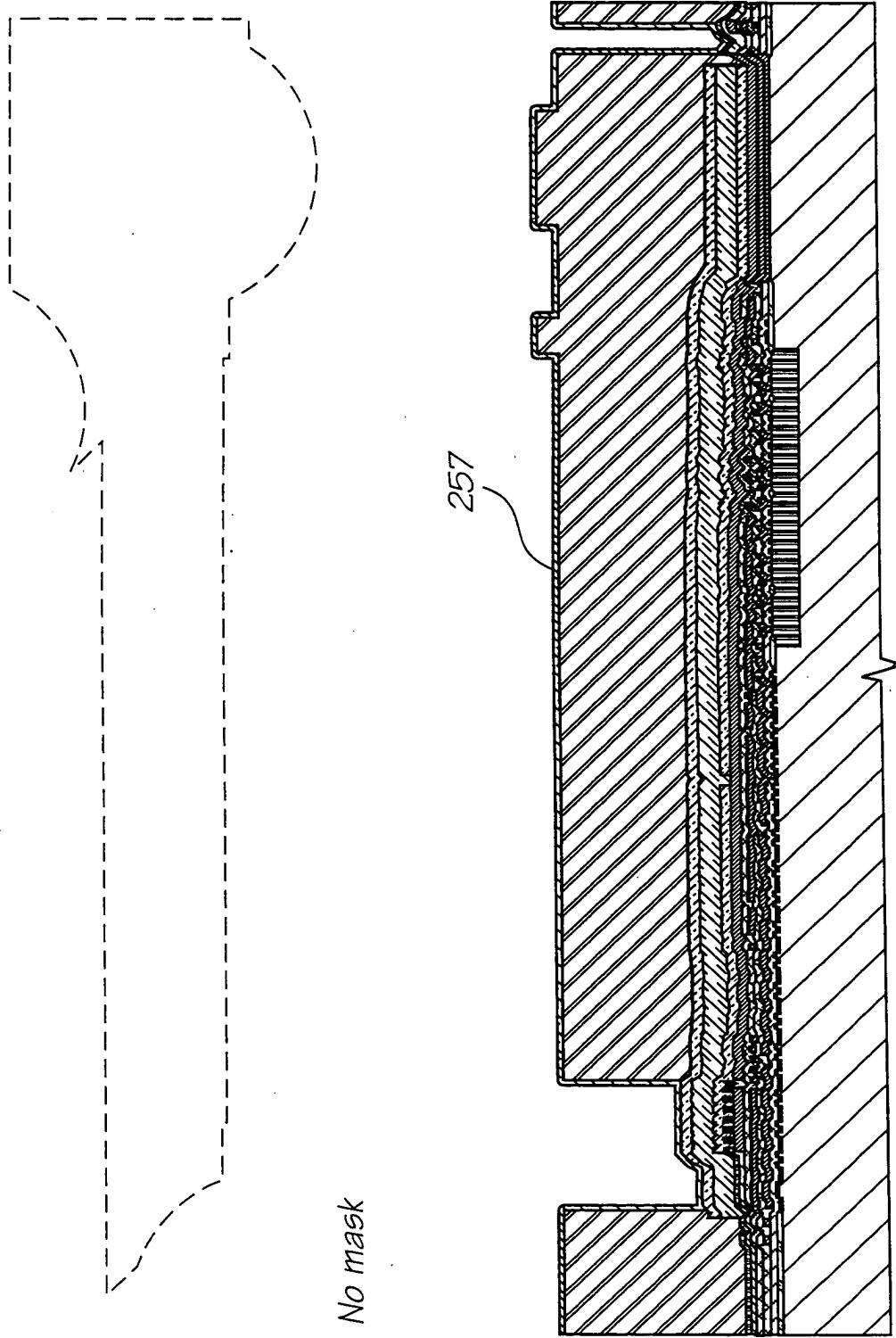
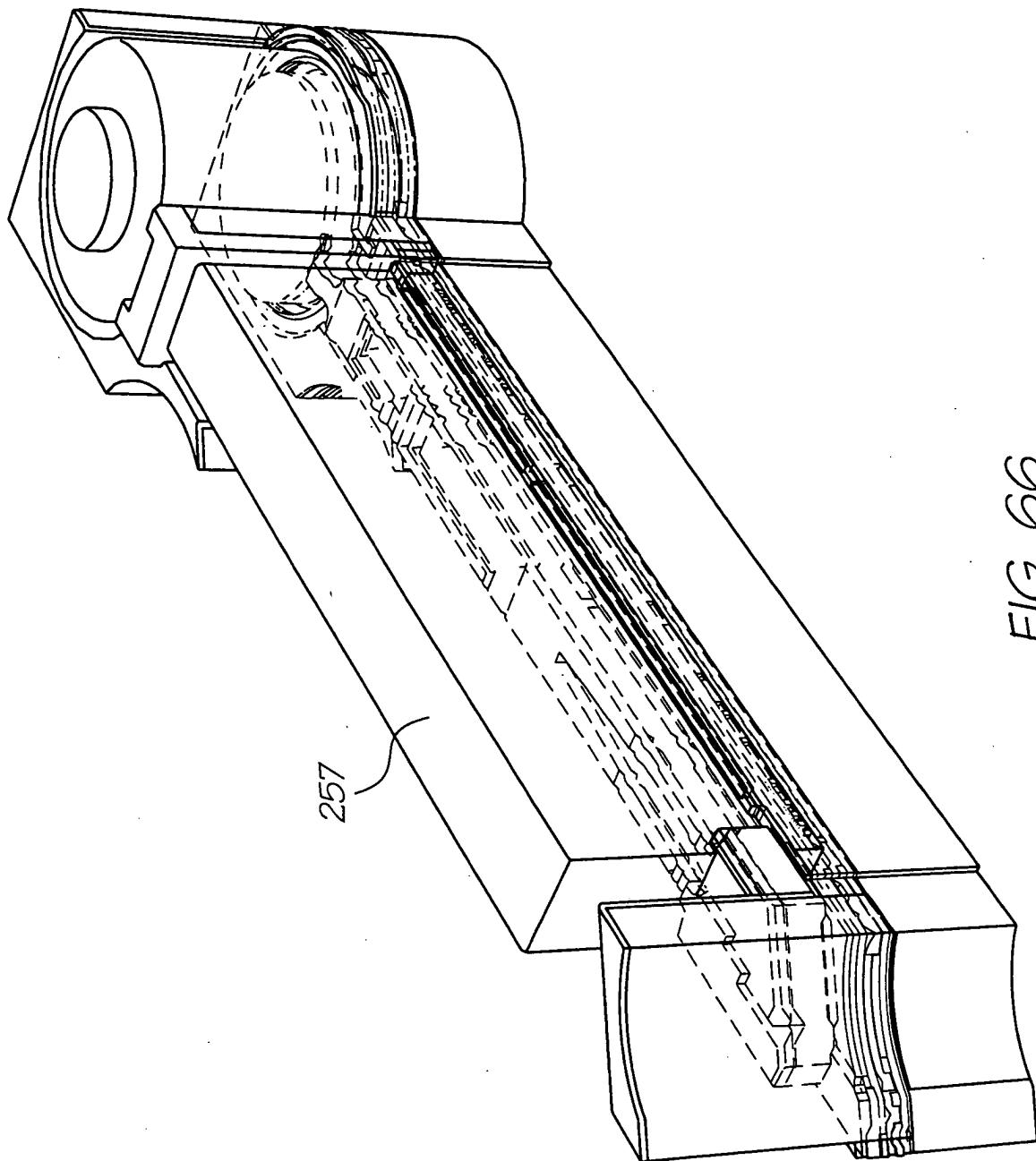


FIG. 65

*Deposit chamber walls*

FIG. 66



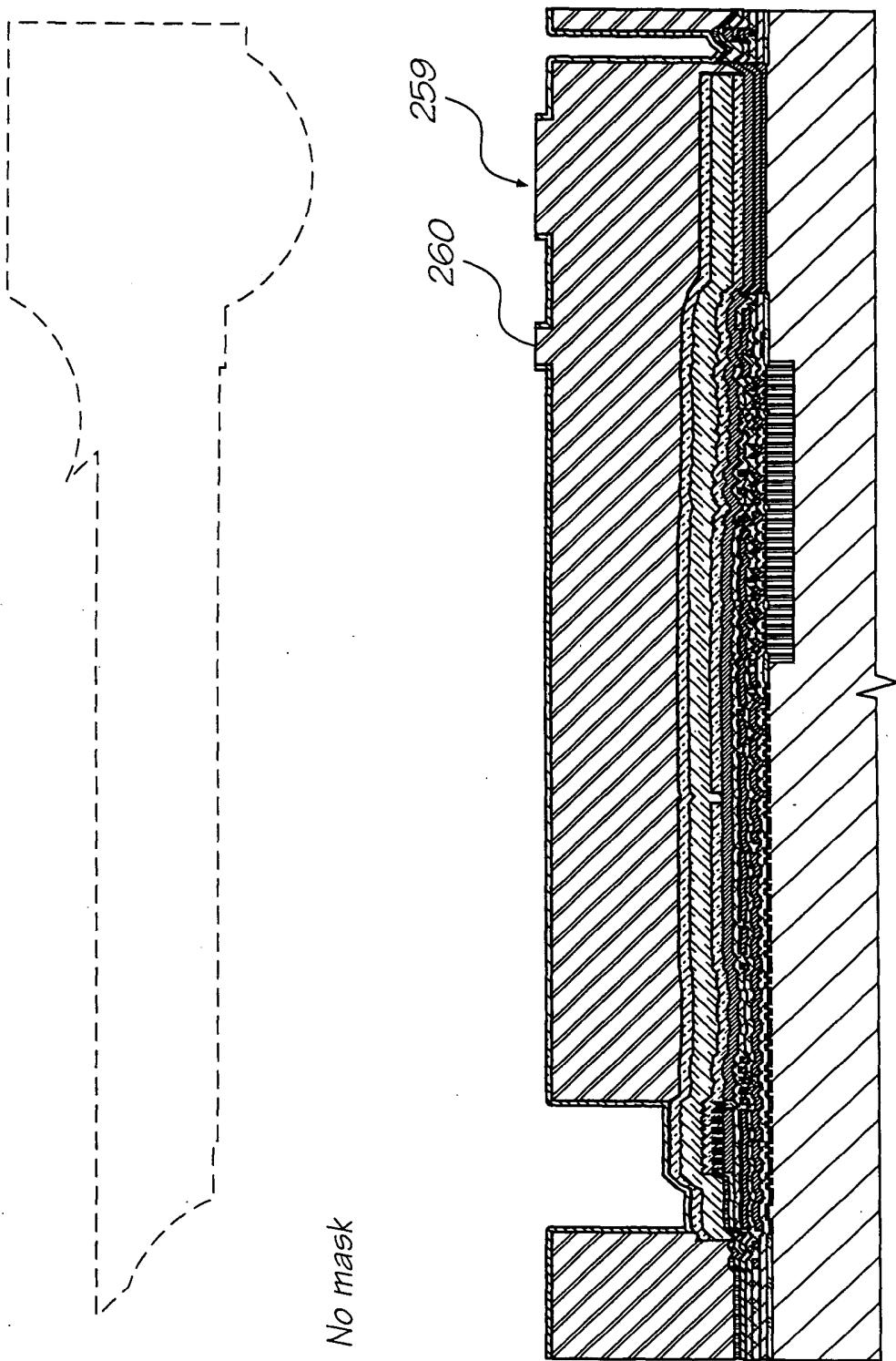


FIG. 67

Form self-aligned nozzles using CMP

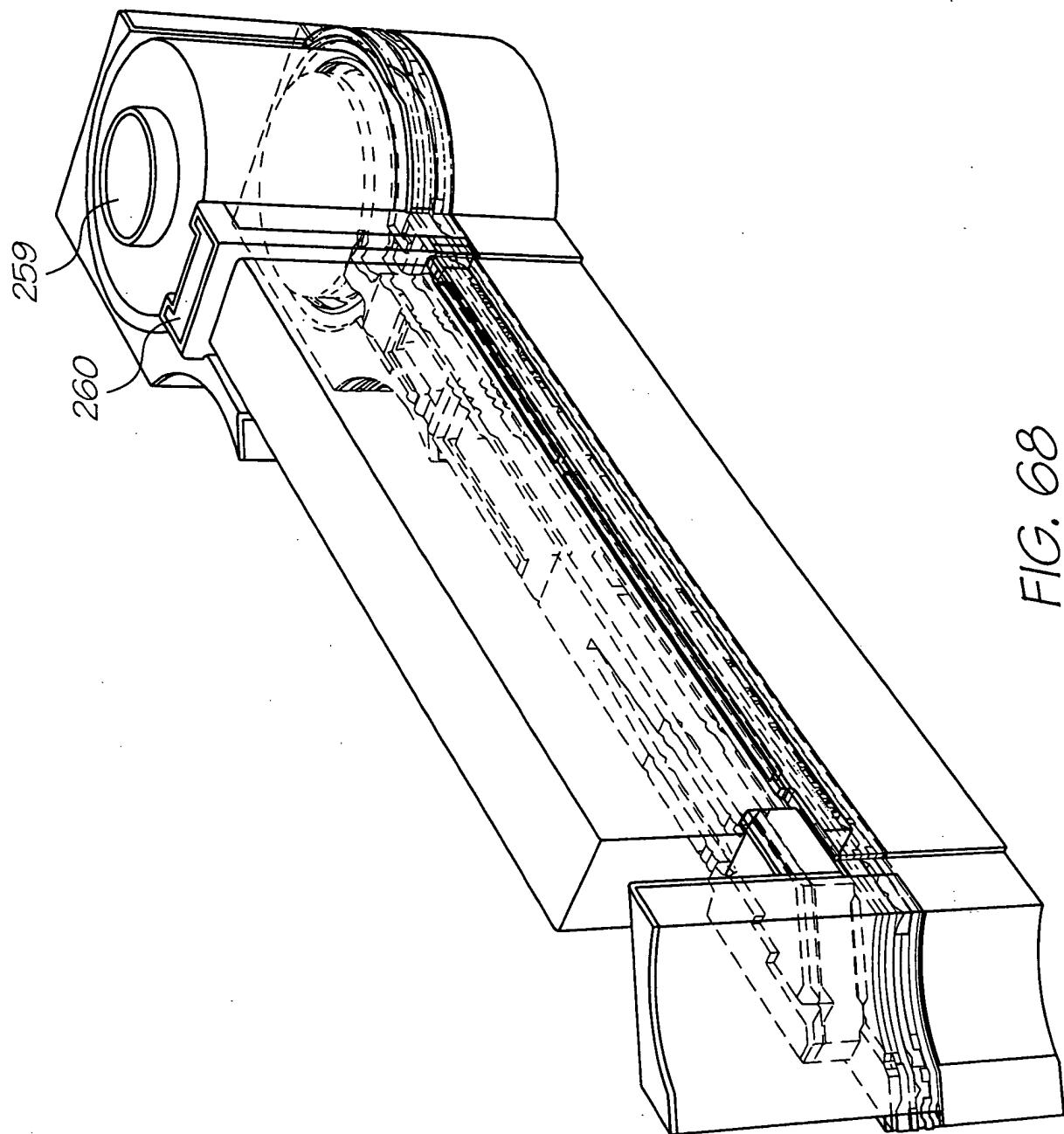


FIG. 68

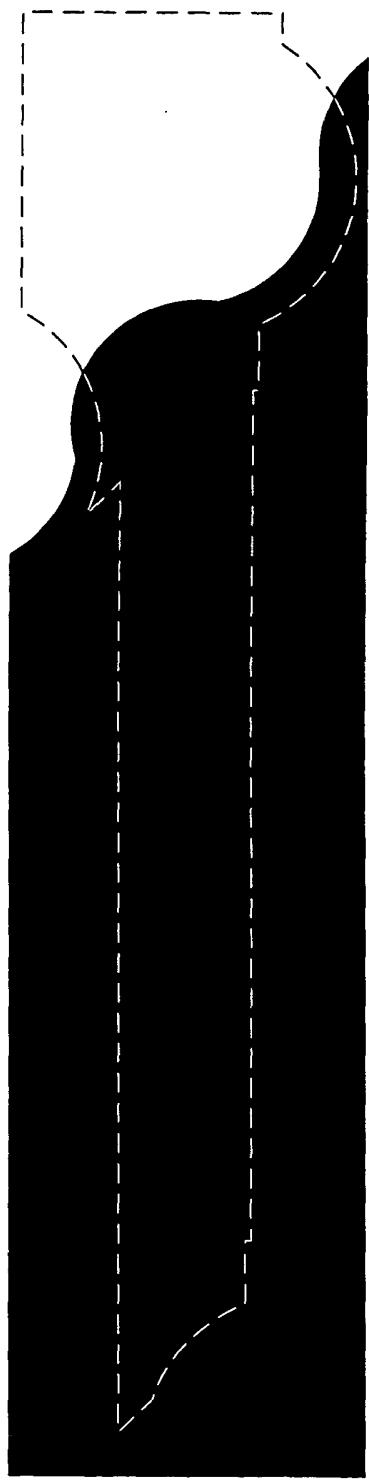


FIG. 70  
Back-etch inlet mask

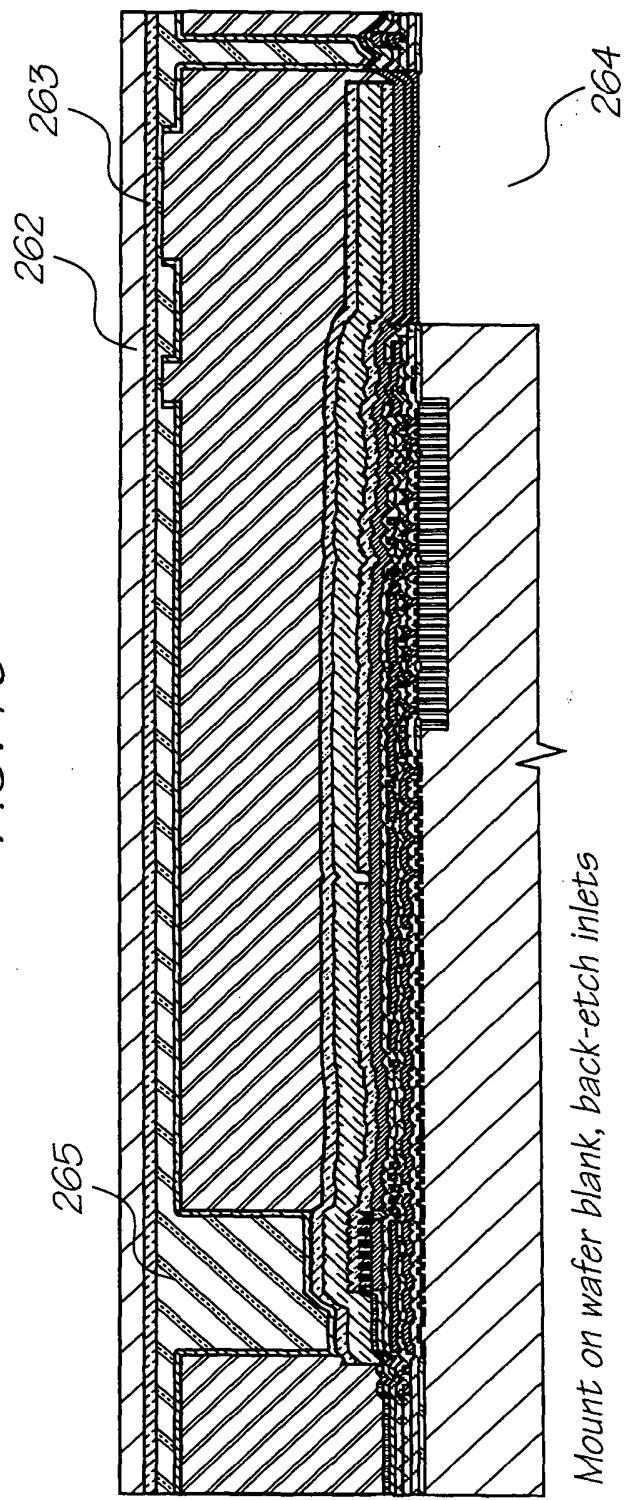
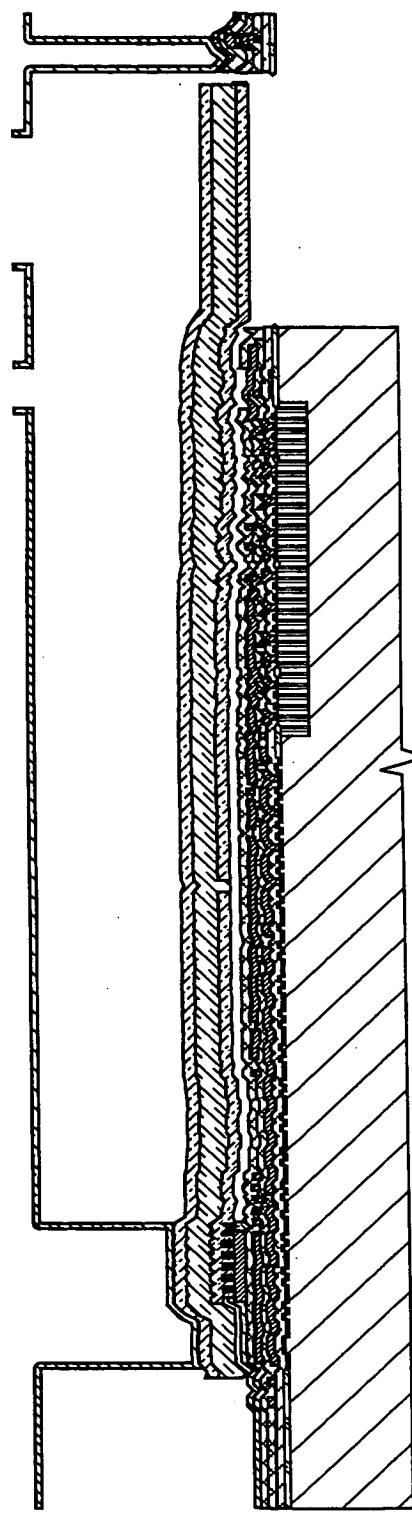
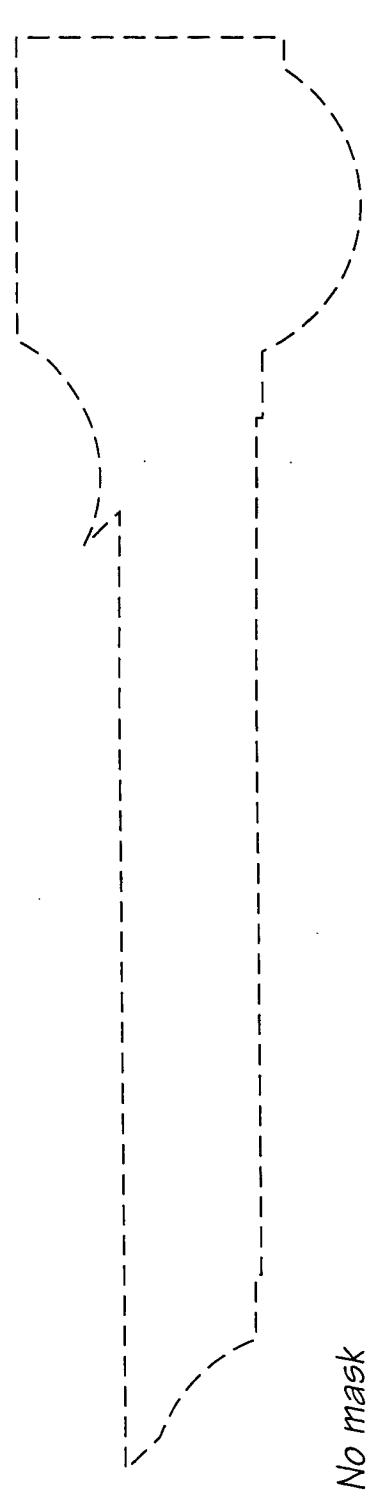
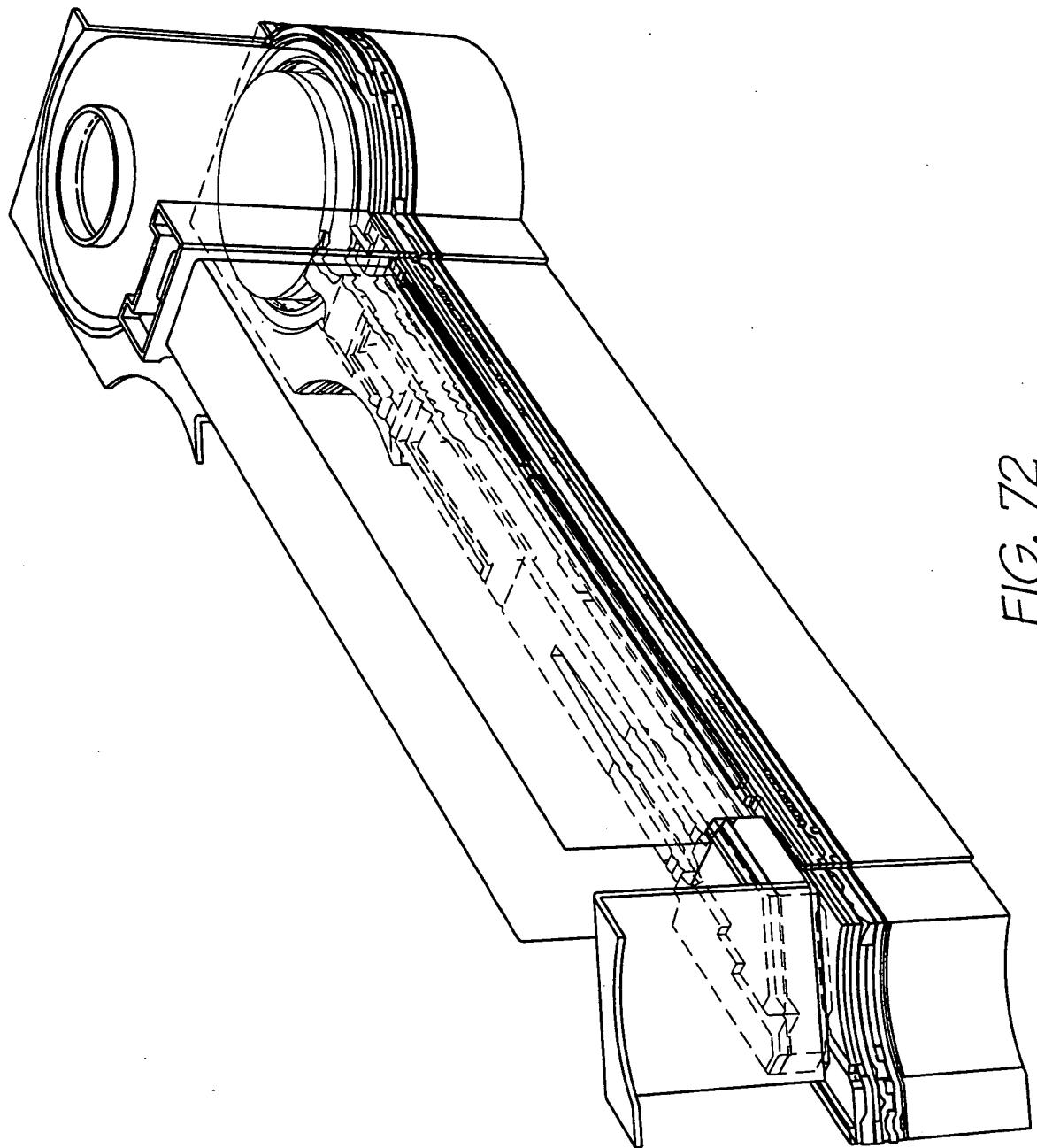


FIG. 69  
Mount on wafer blank, back-etch inlets



*Detach from wafer blank, etch sacrificial material*

FIG. 71



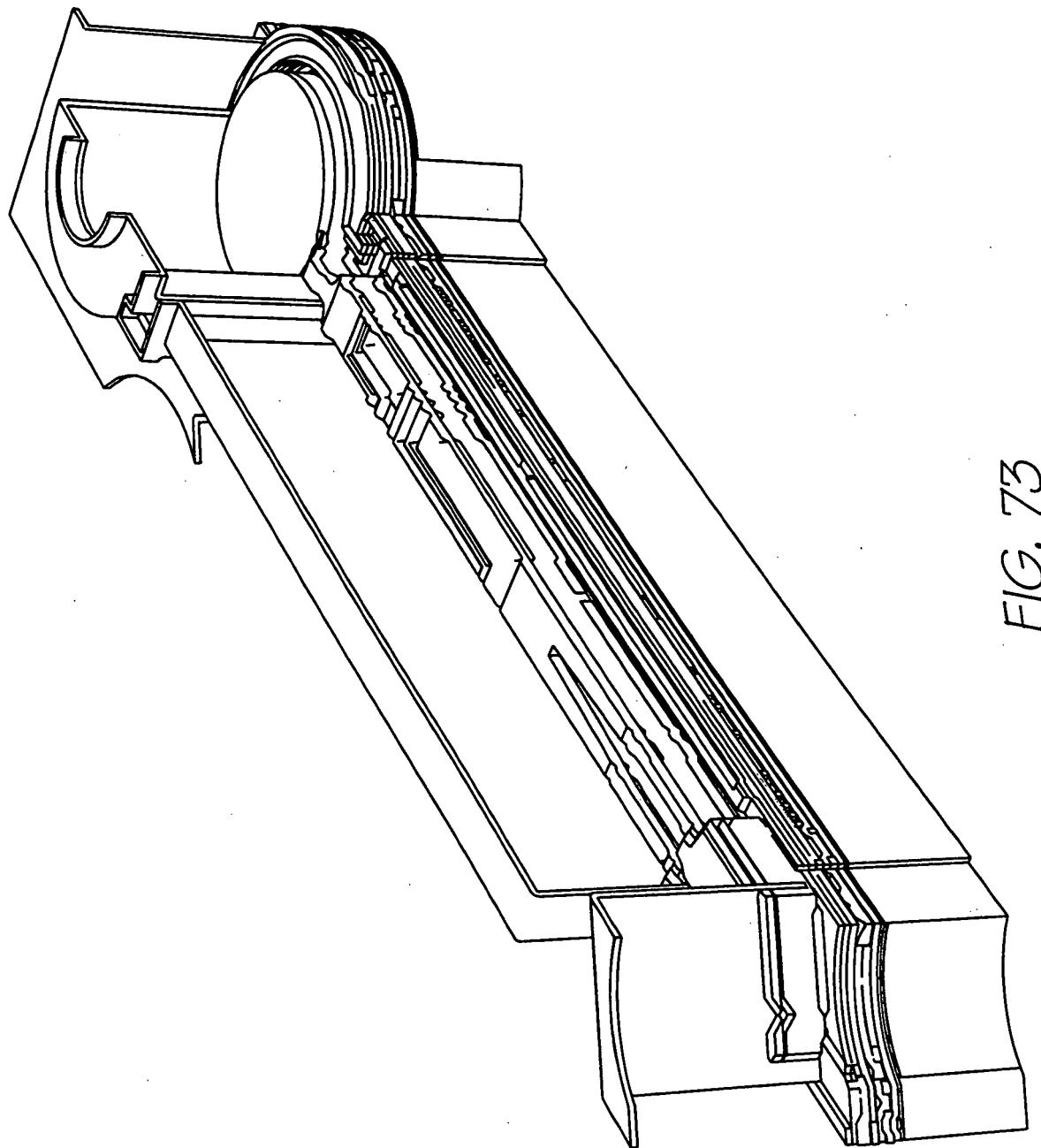


FIG. 73

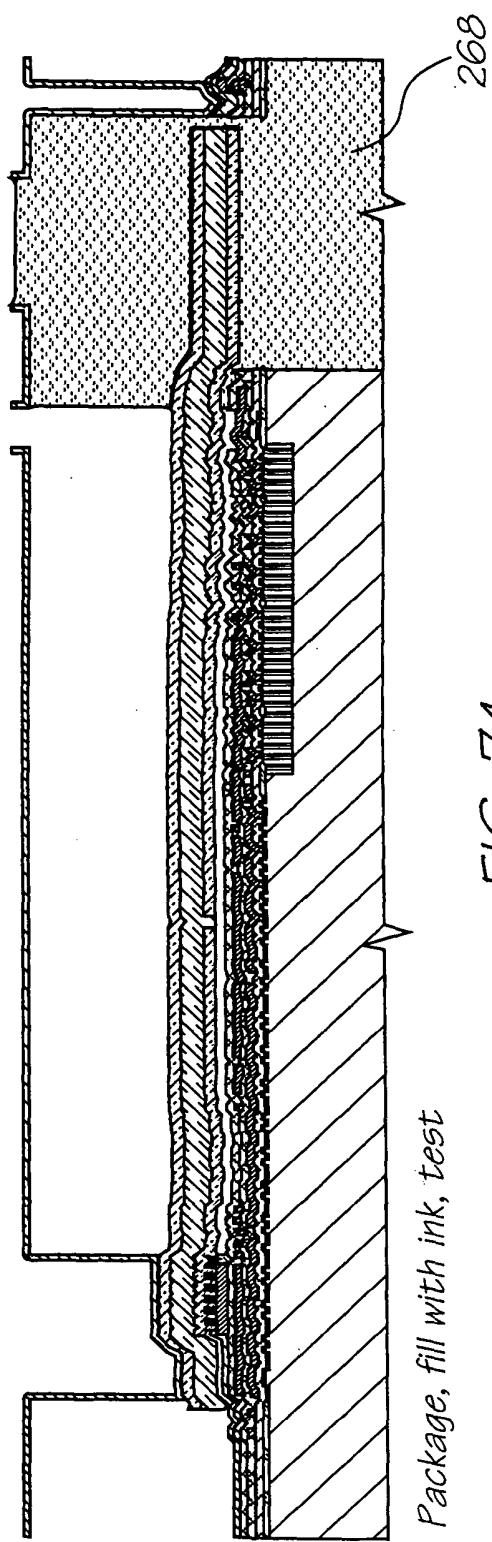
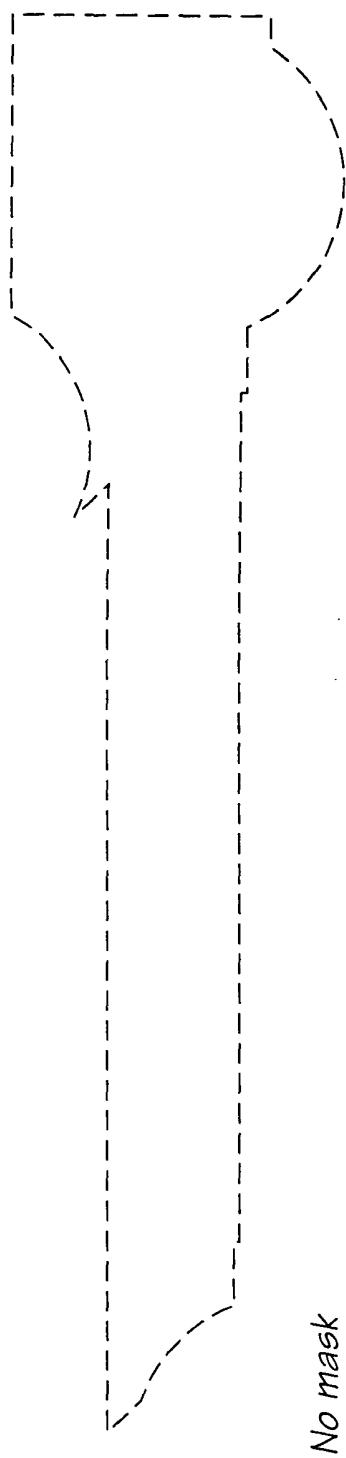


FIG. 74

Package, fill with ink, test

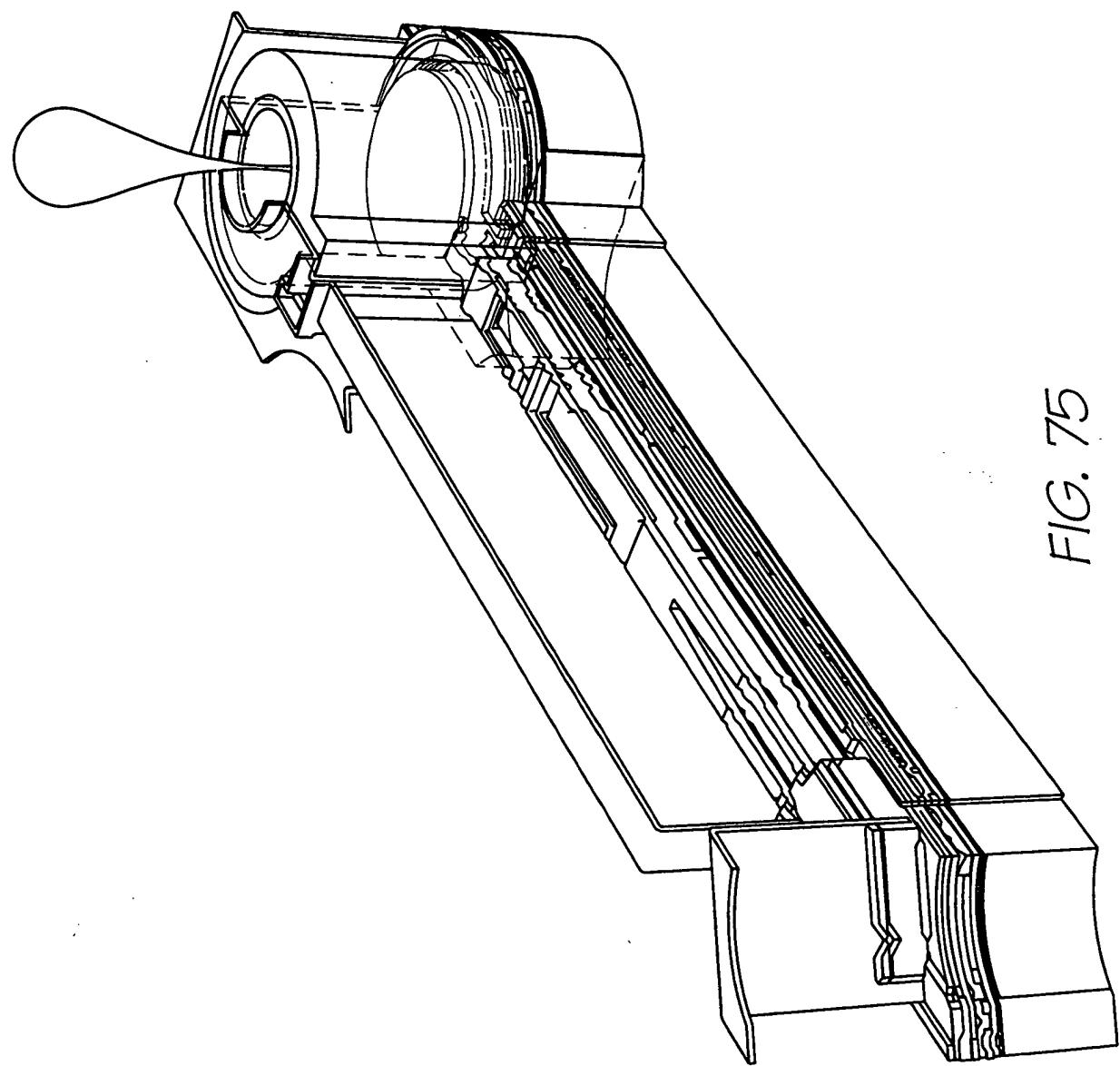


FIG. 75

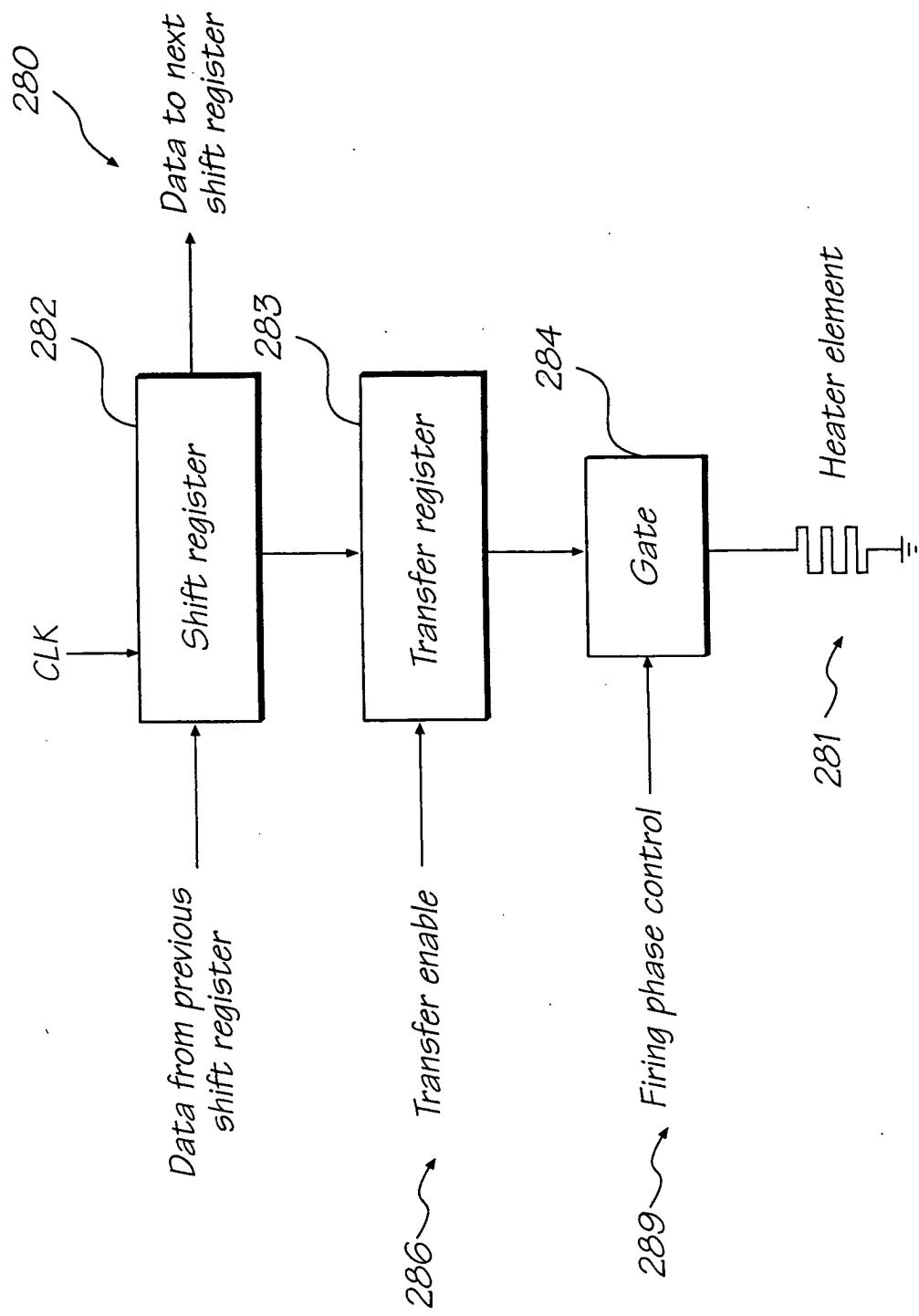


FIG. 76

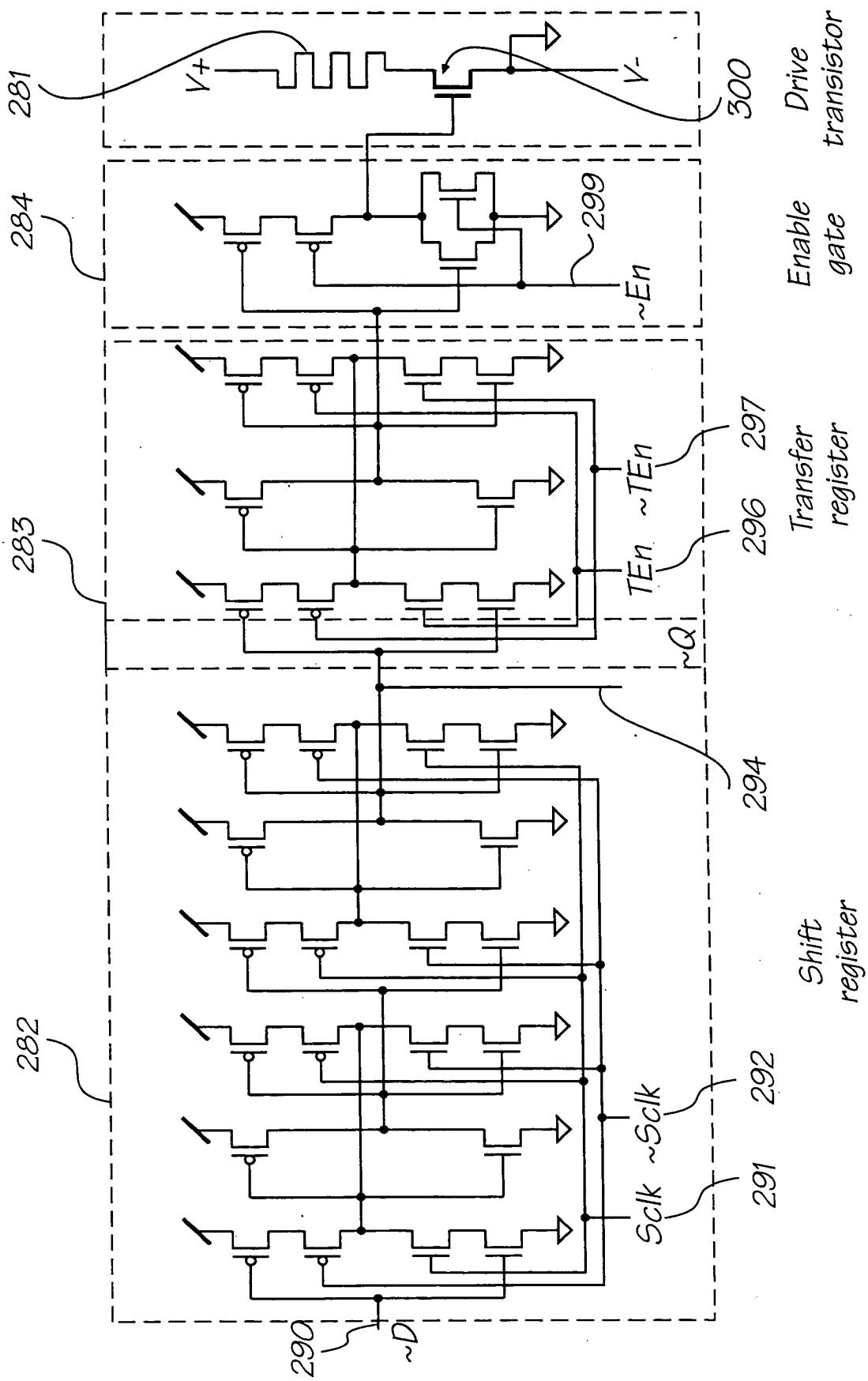


FIG. 77

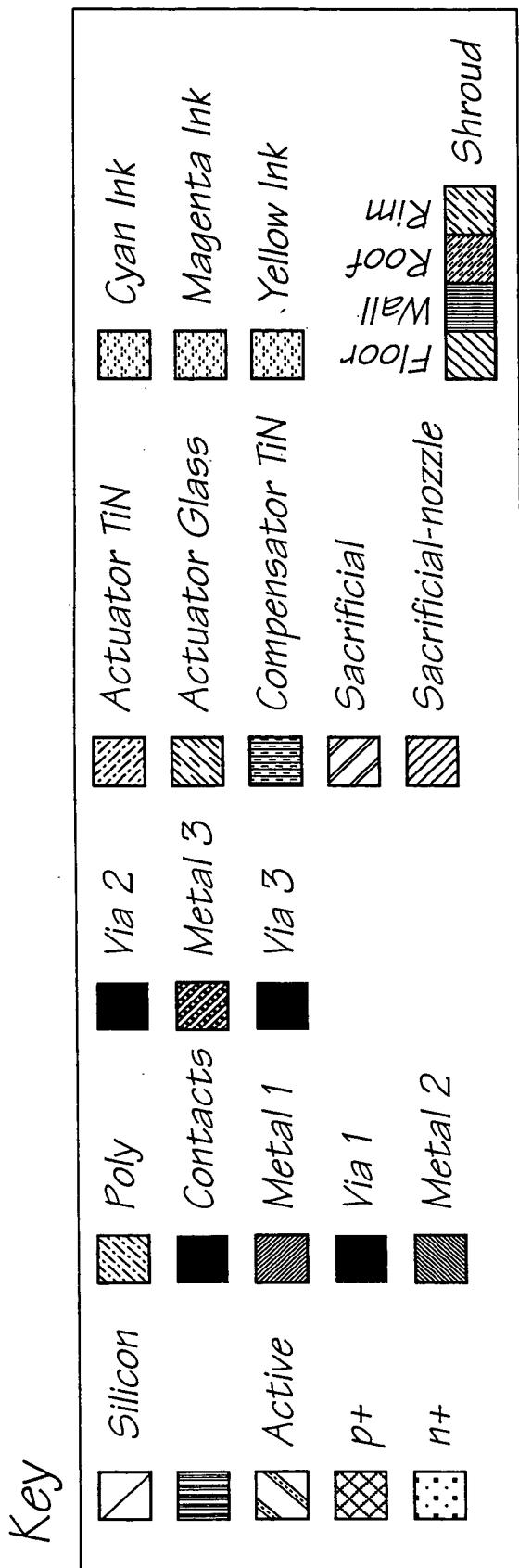


FIG. 78

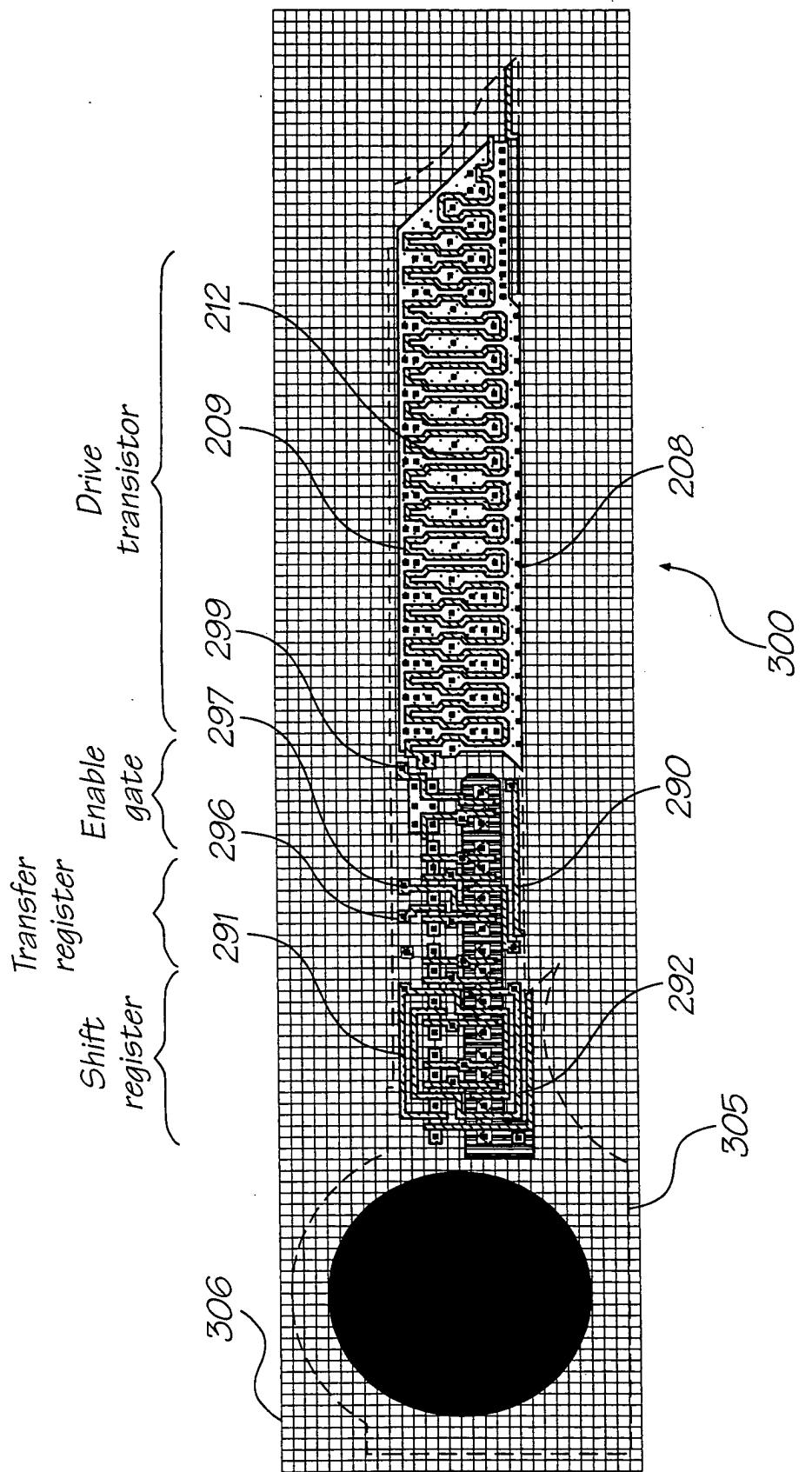


FIG. 79

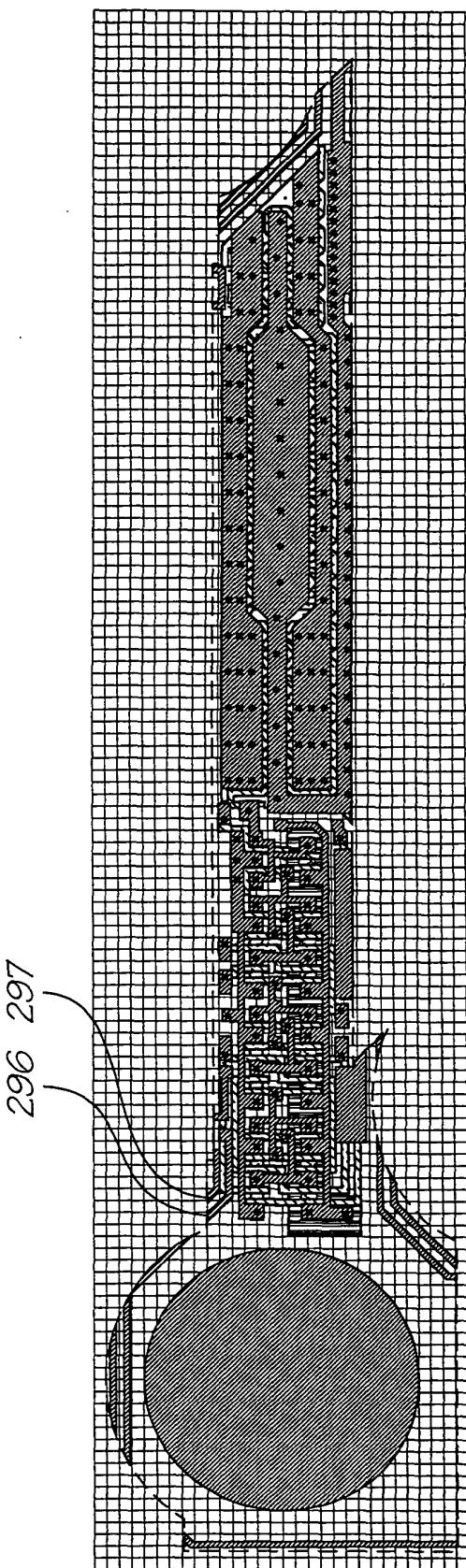


FIG. 80

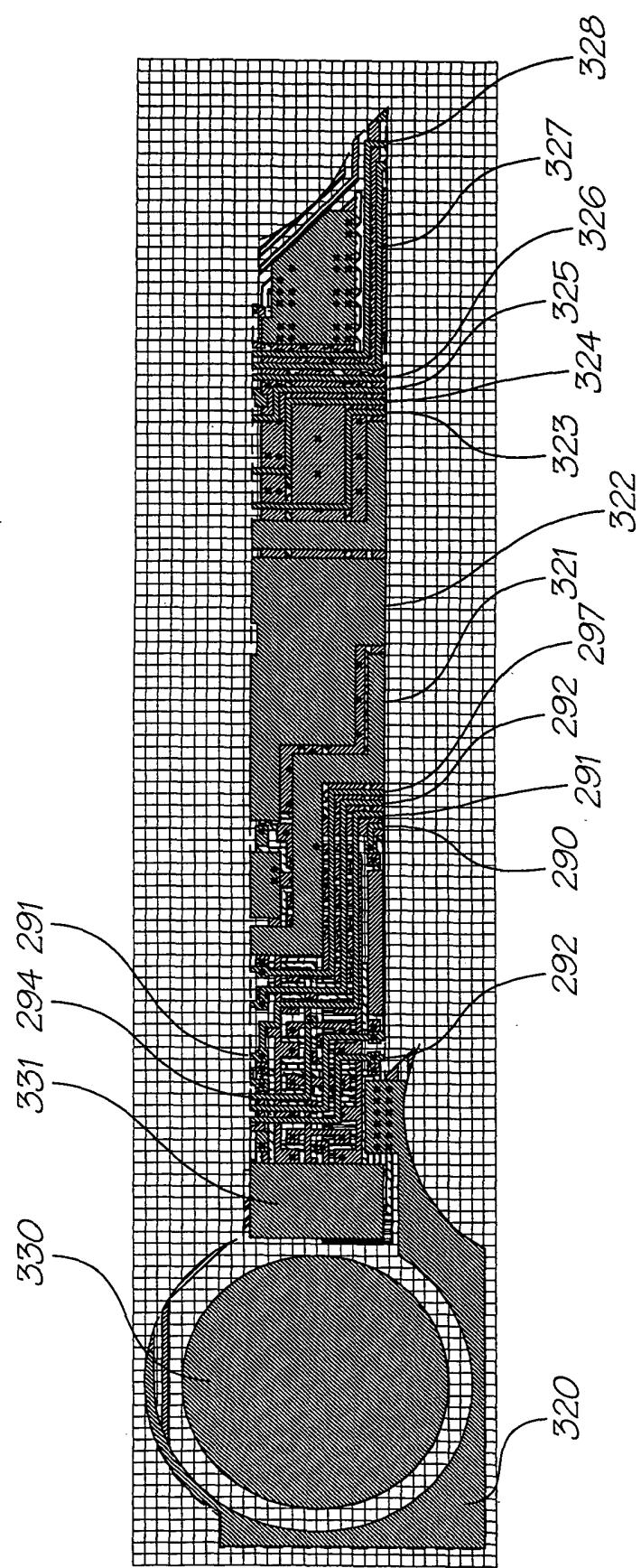


FIG. 81

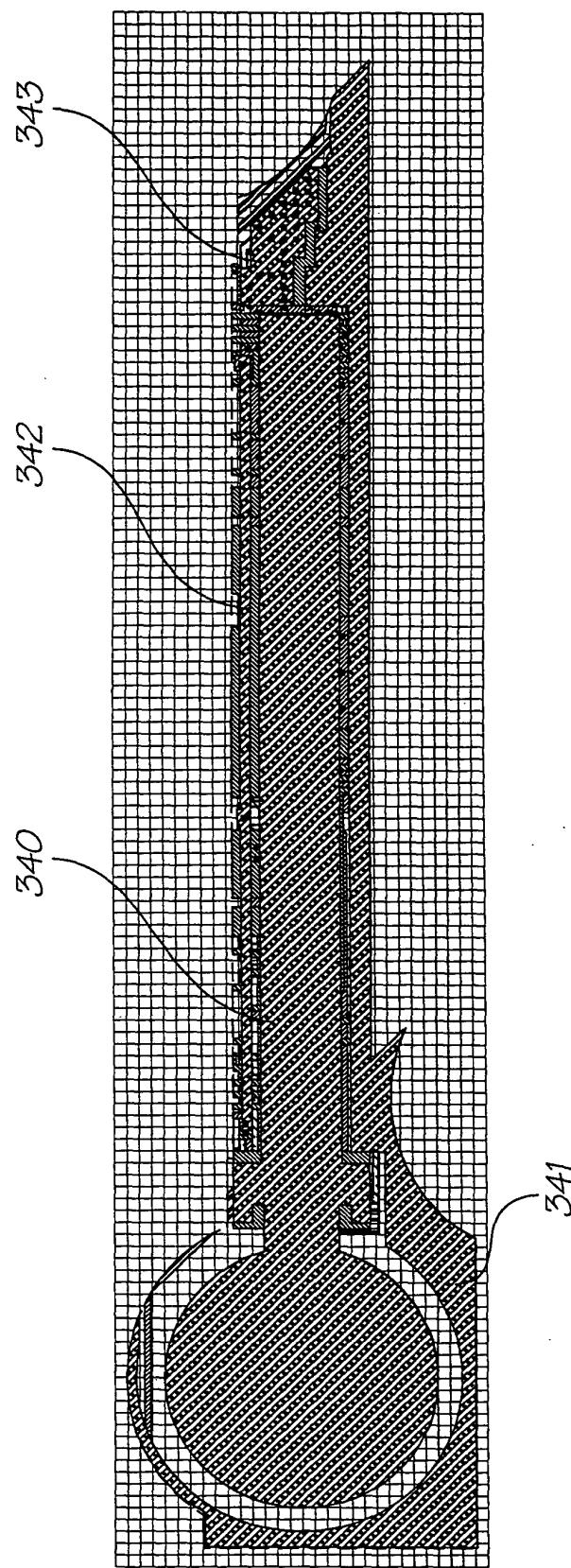


FIG. 82

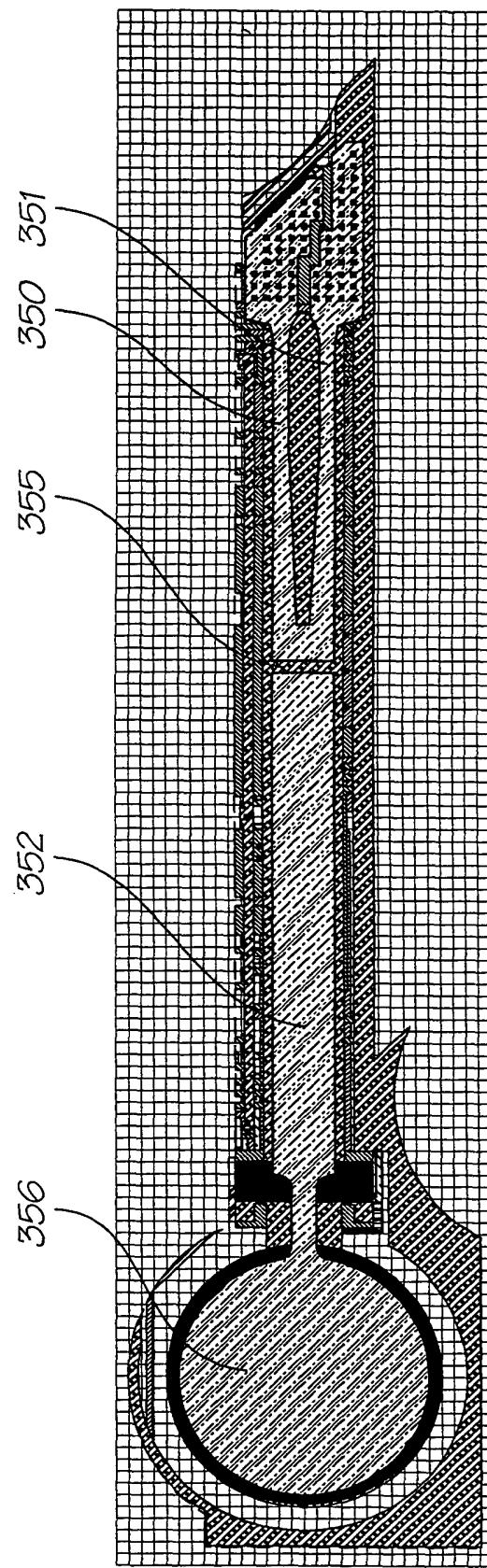


FIG. 83

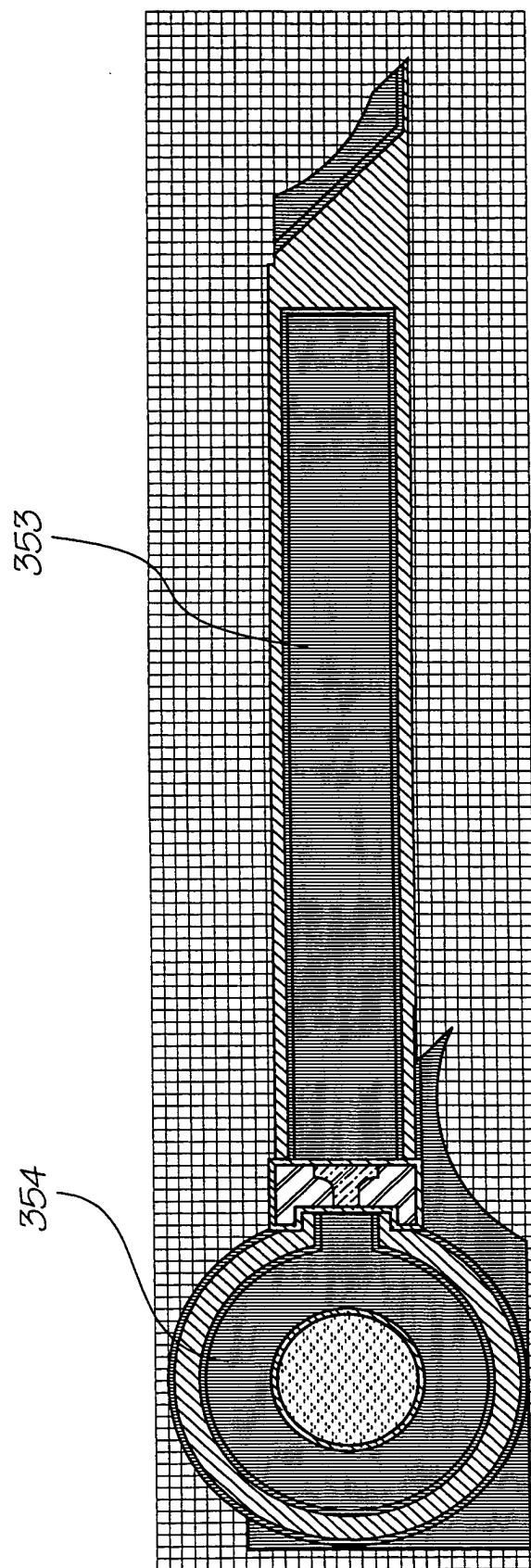


FIG. 84

60/76

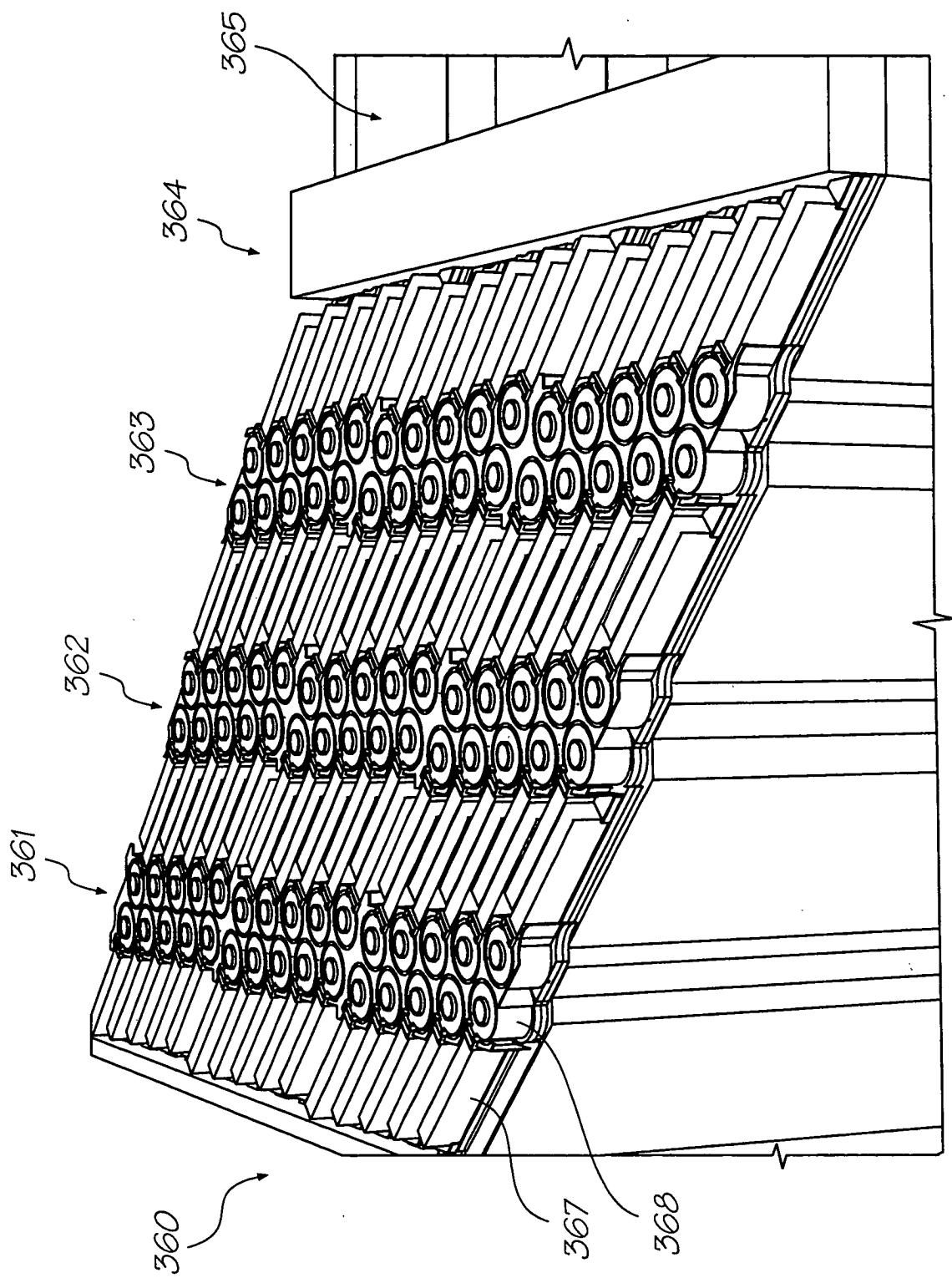


FIG. 85

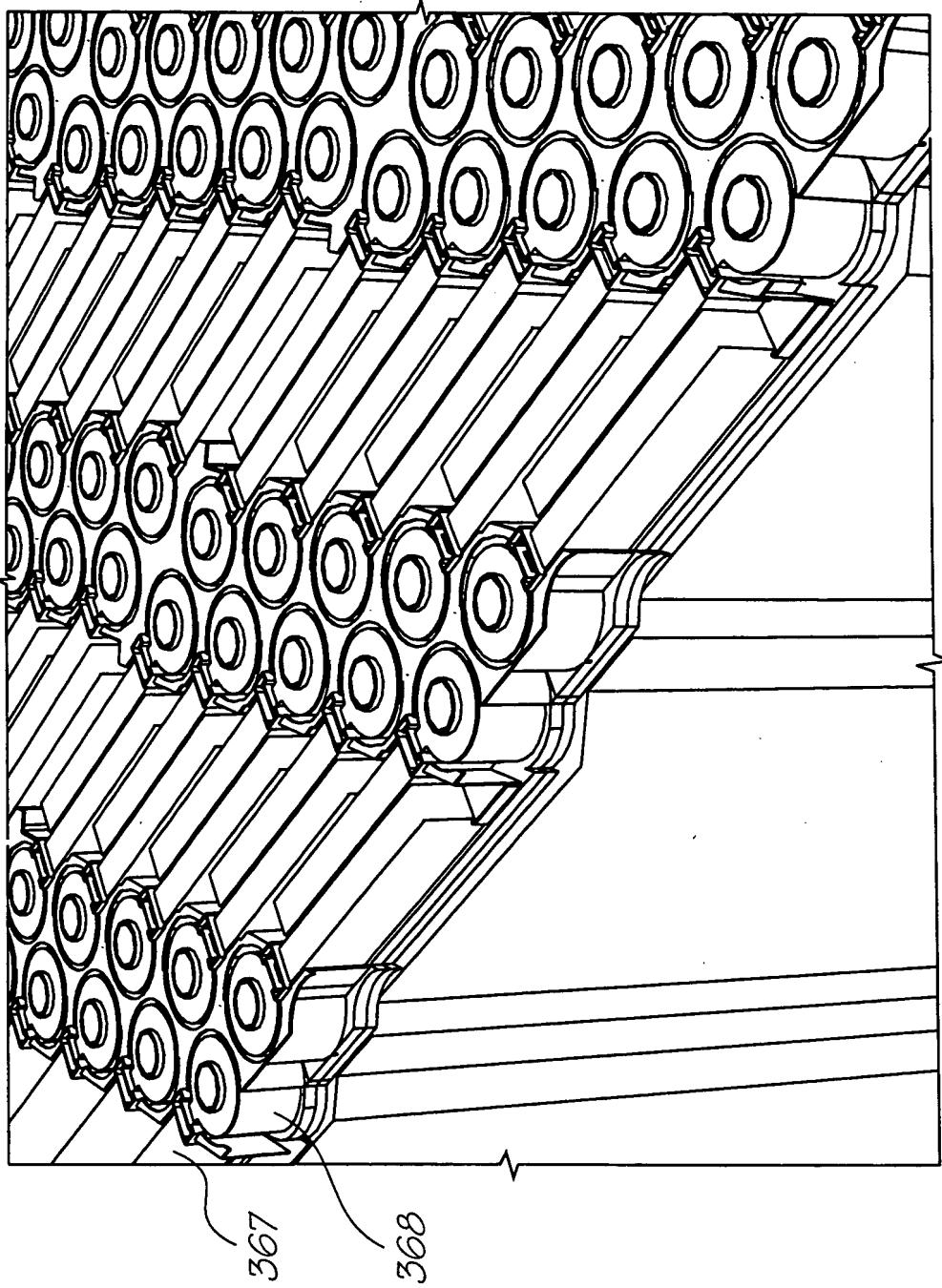
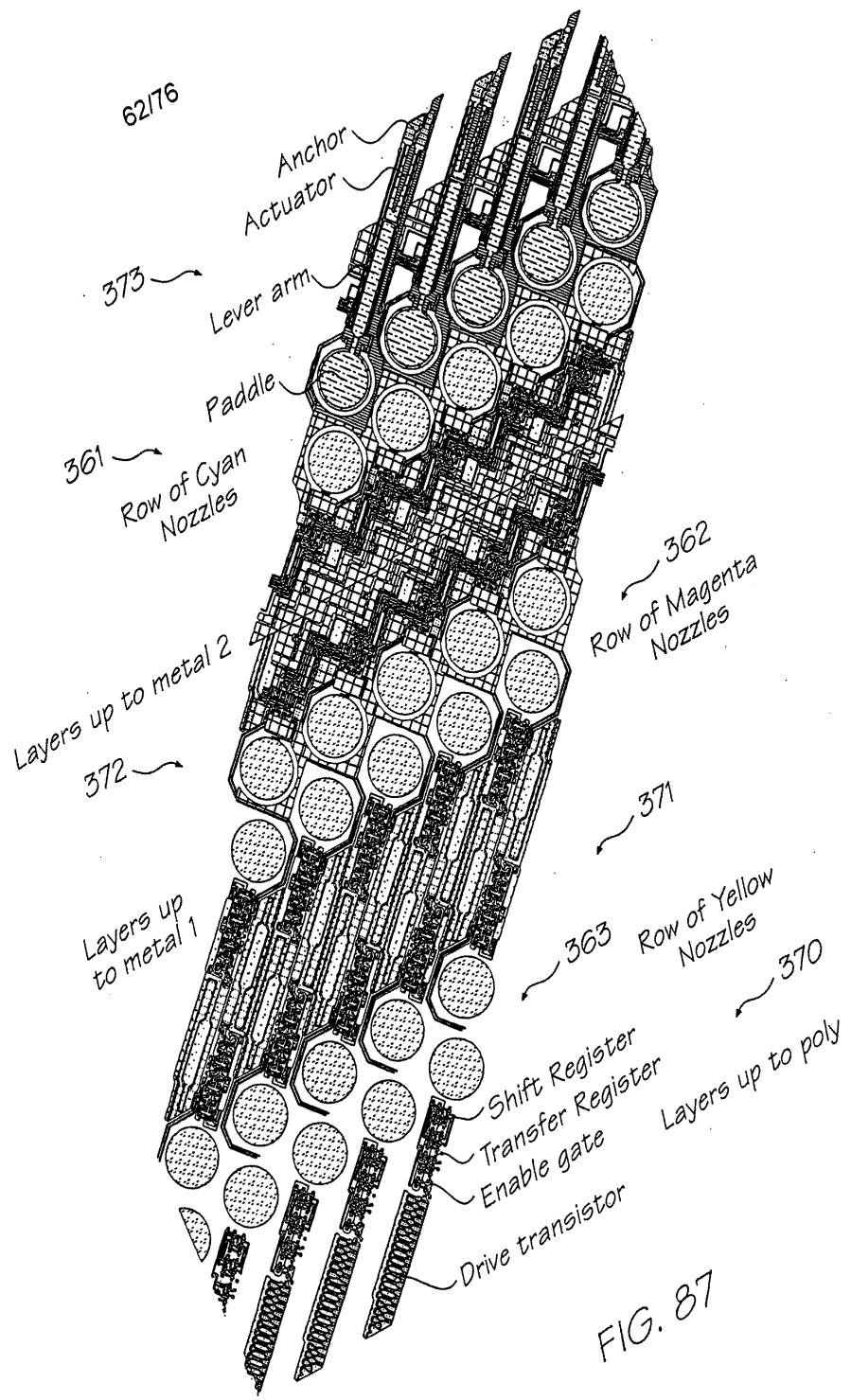


FIG. 86



63/76

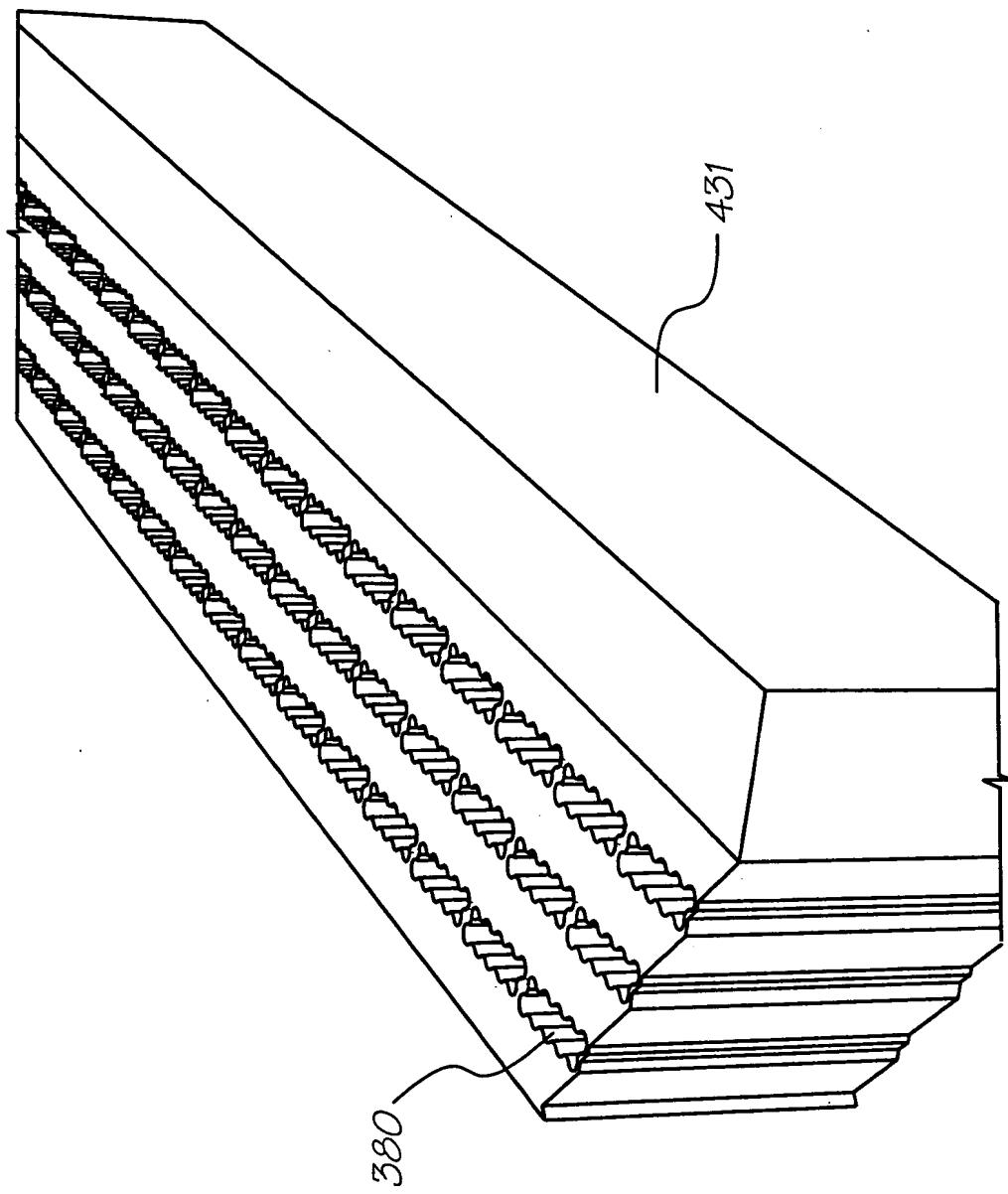


FIG. 88

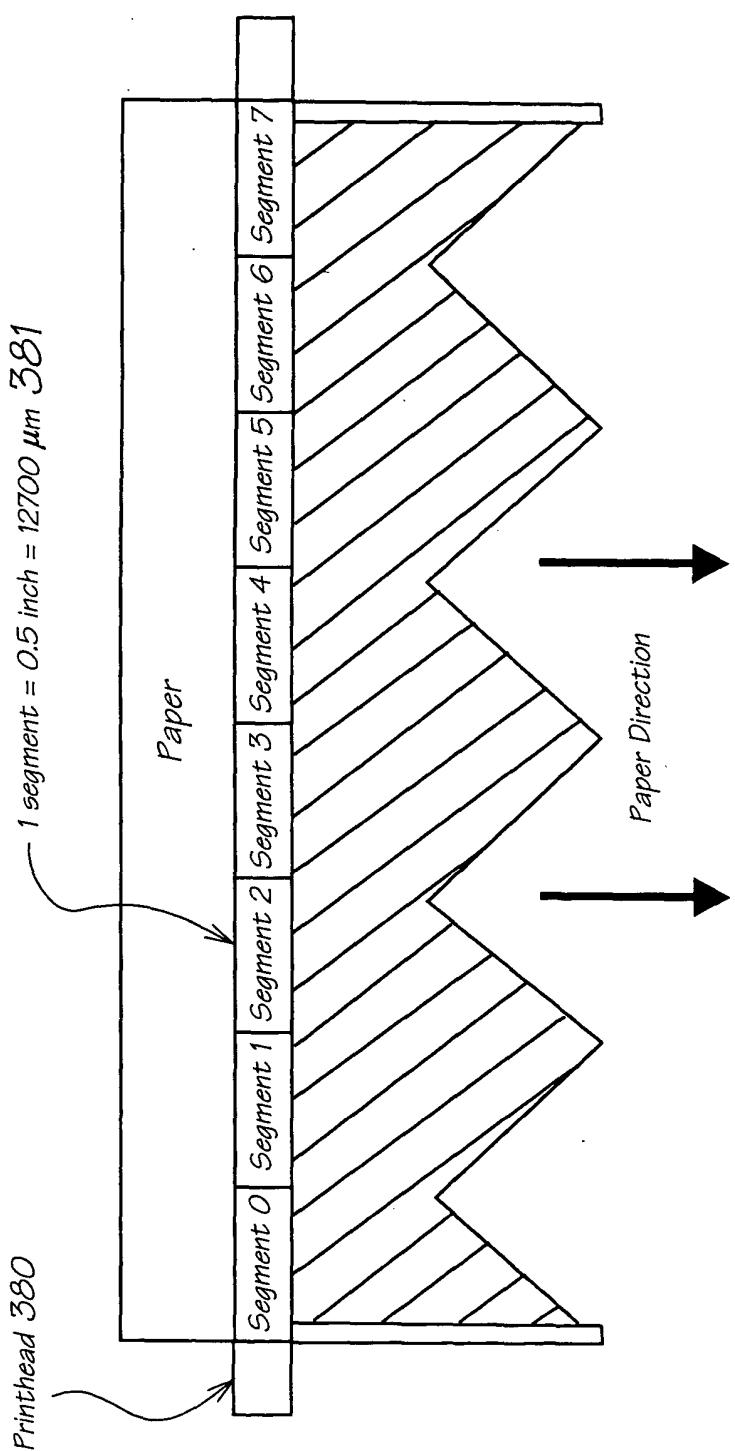
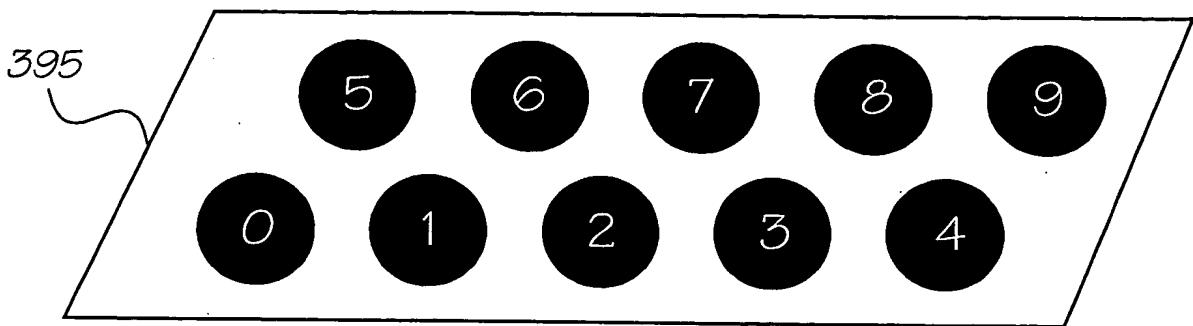


FIG. 89

65/76



*A single pod, numbered by firing order*

FIG. 90

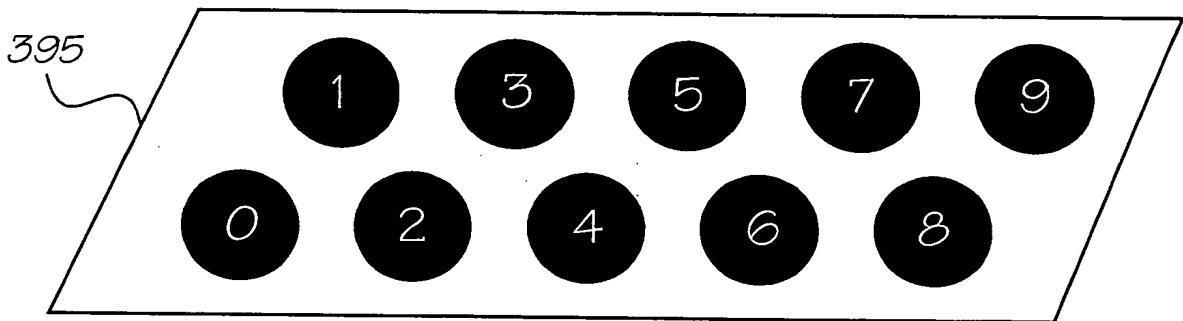


FIG. 91

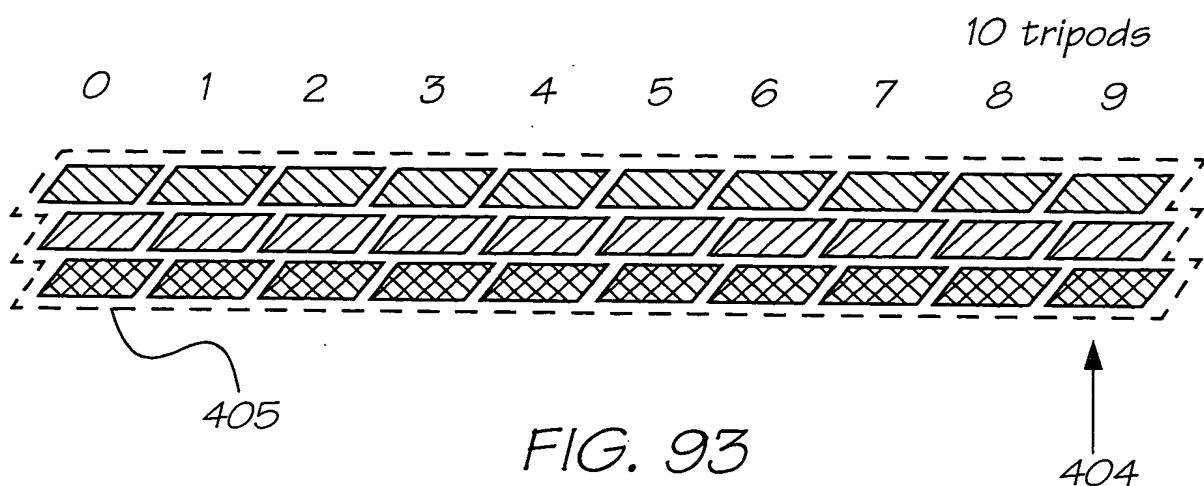


FIG. 93

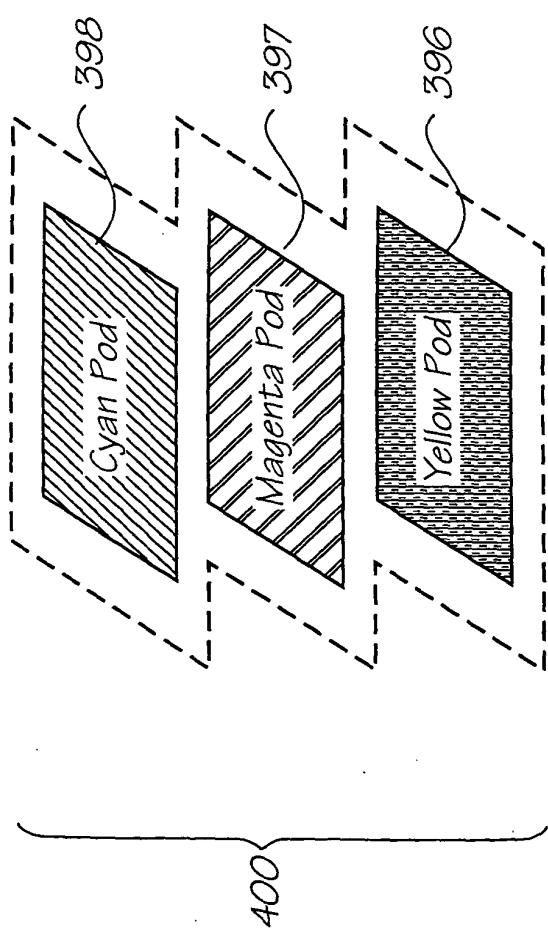


FIG. 92

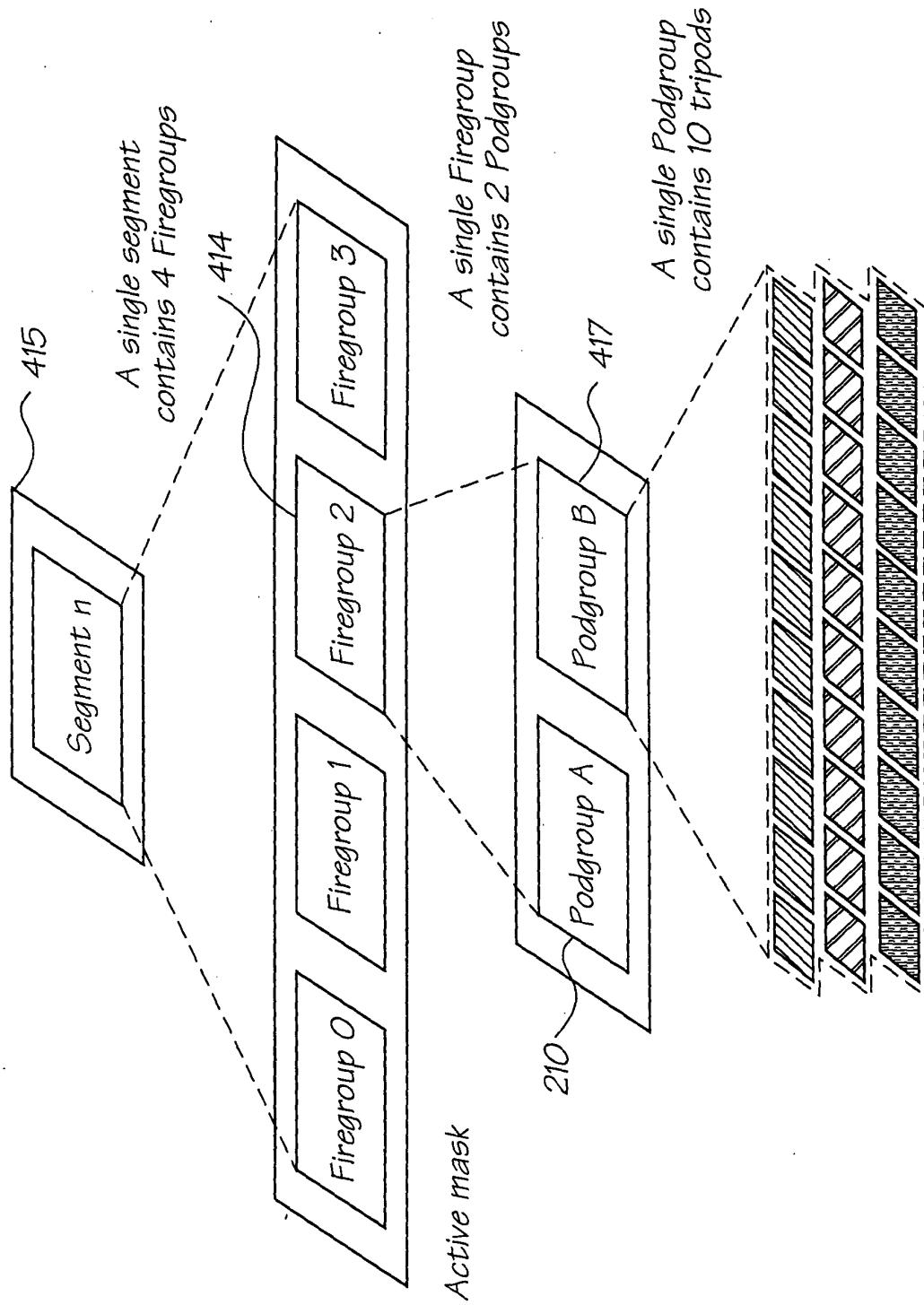


FIG. 94

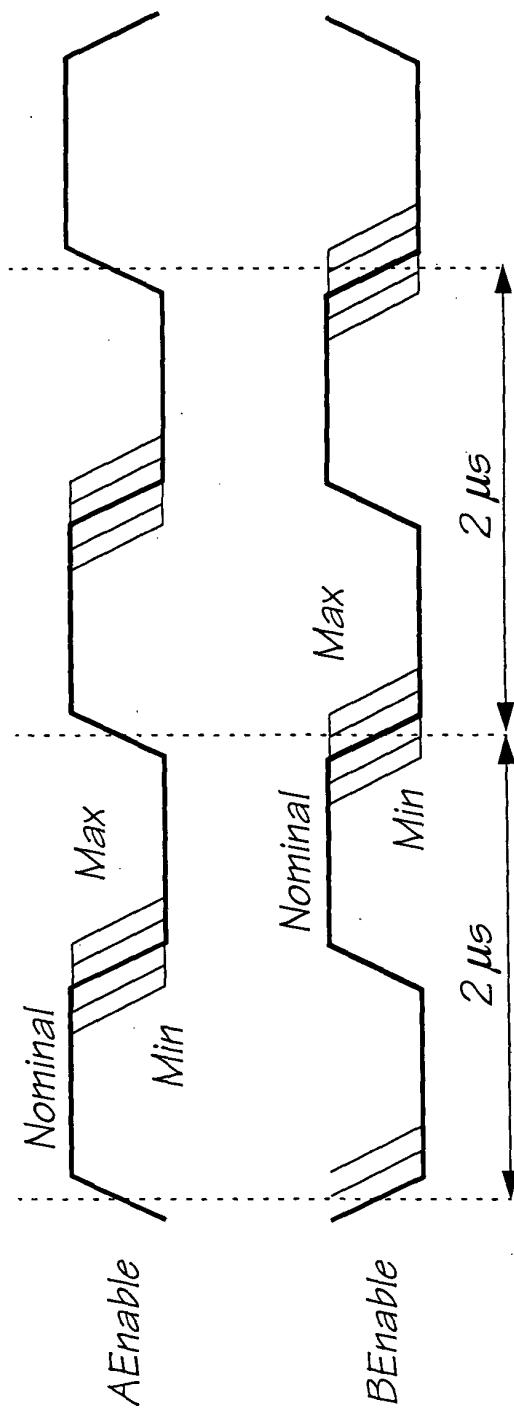


FIG. 95

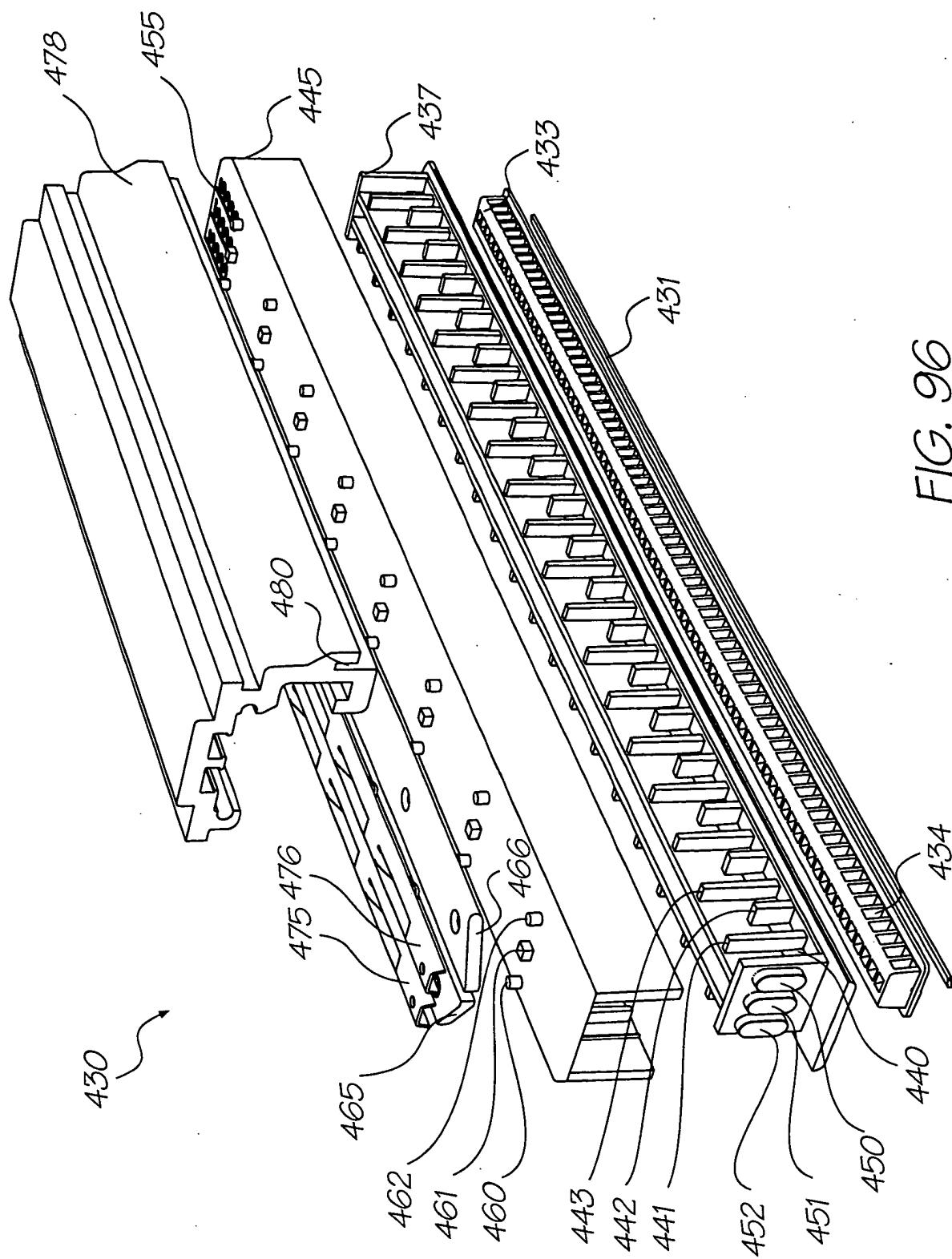


FIG. 96

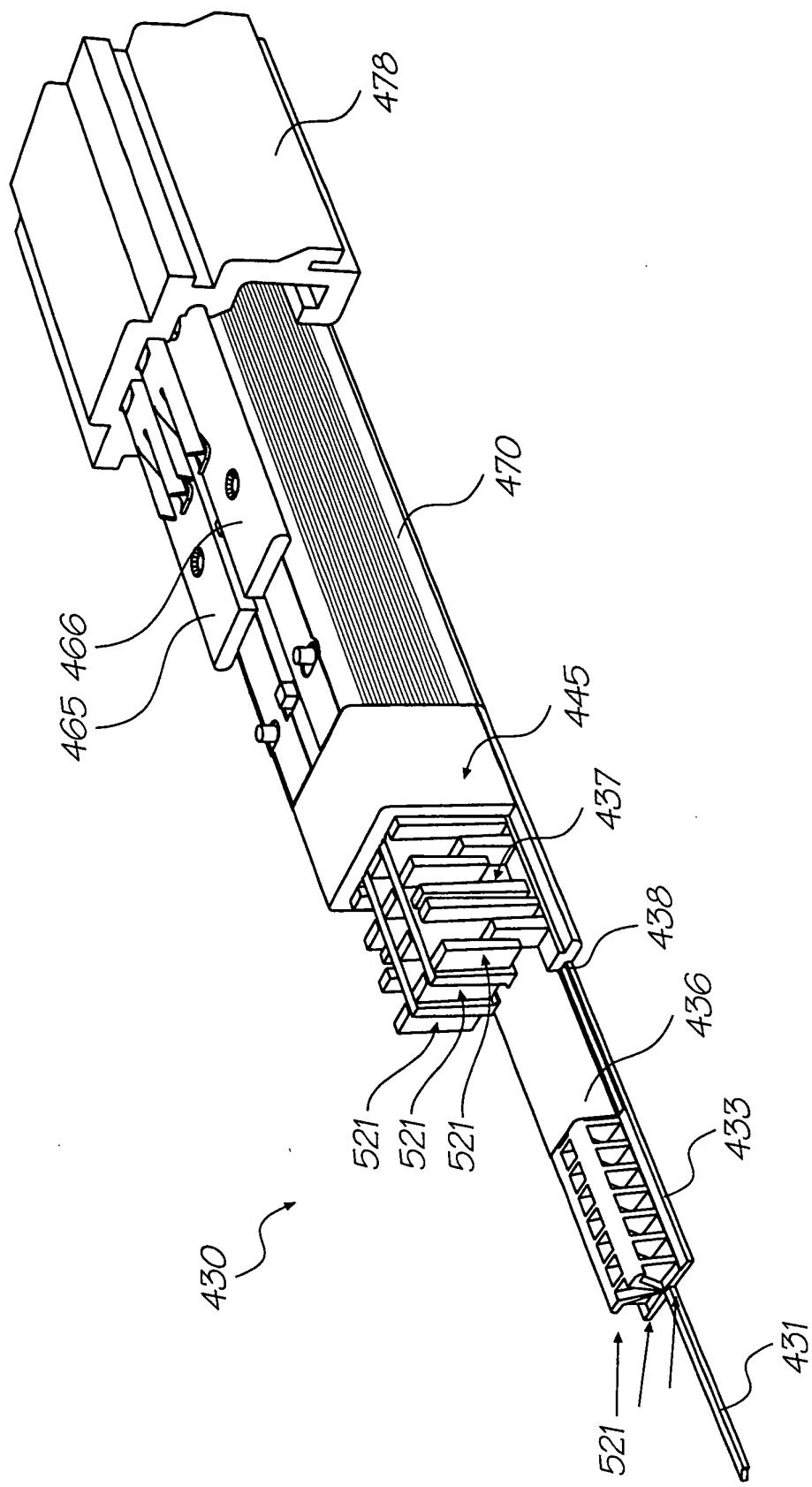
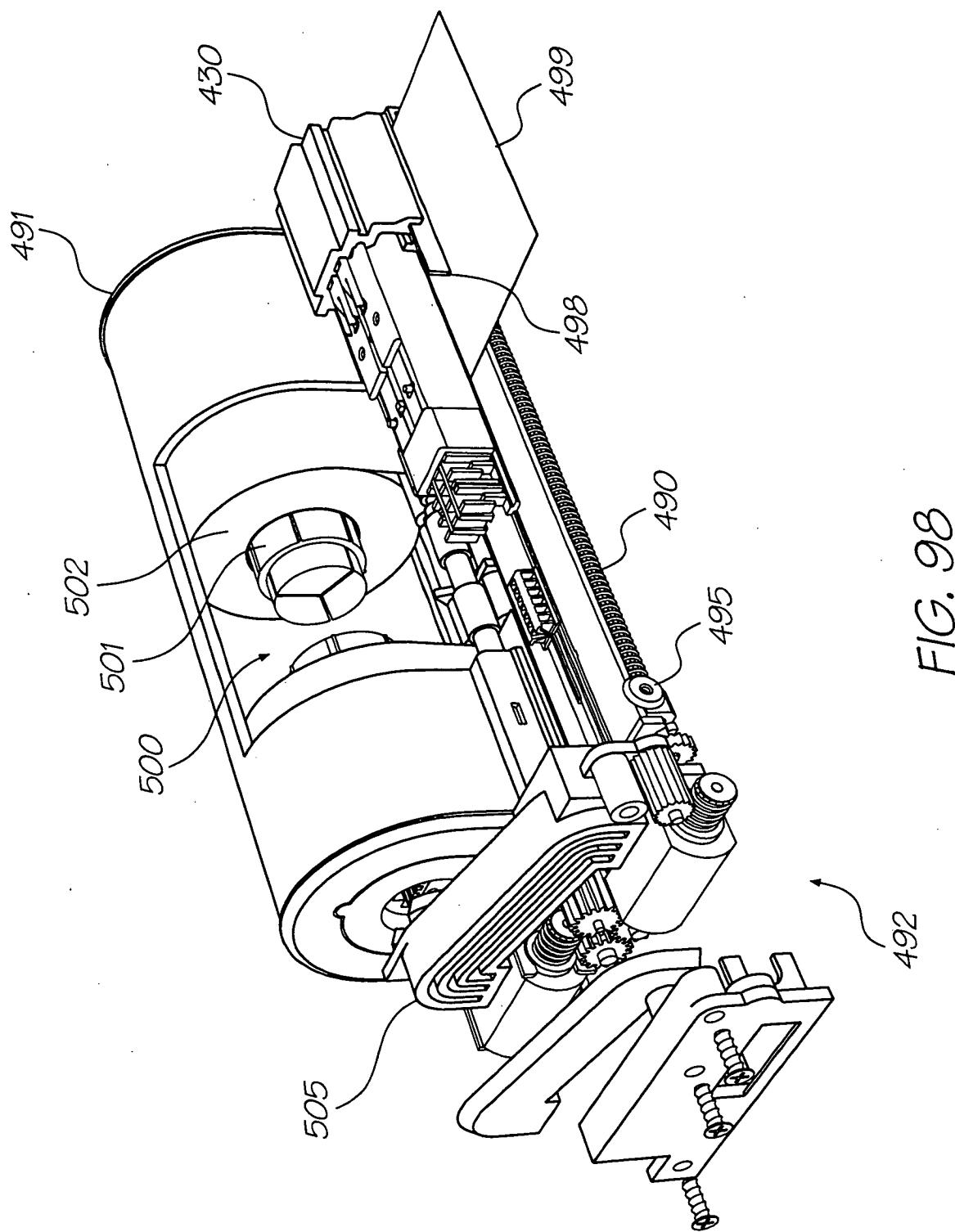


FIG. 97



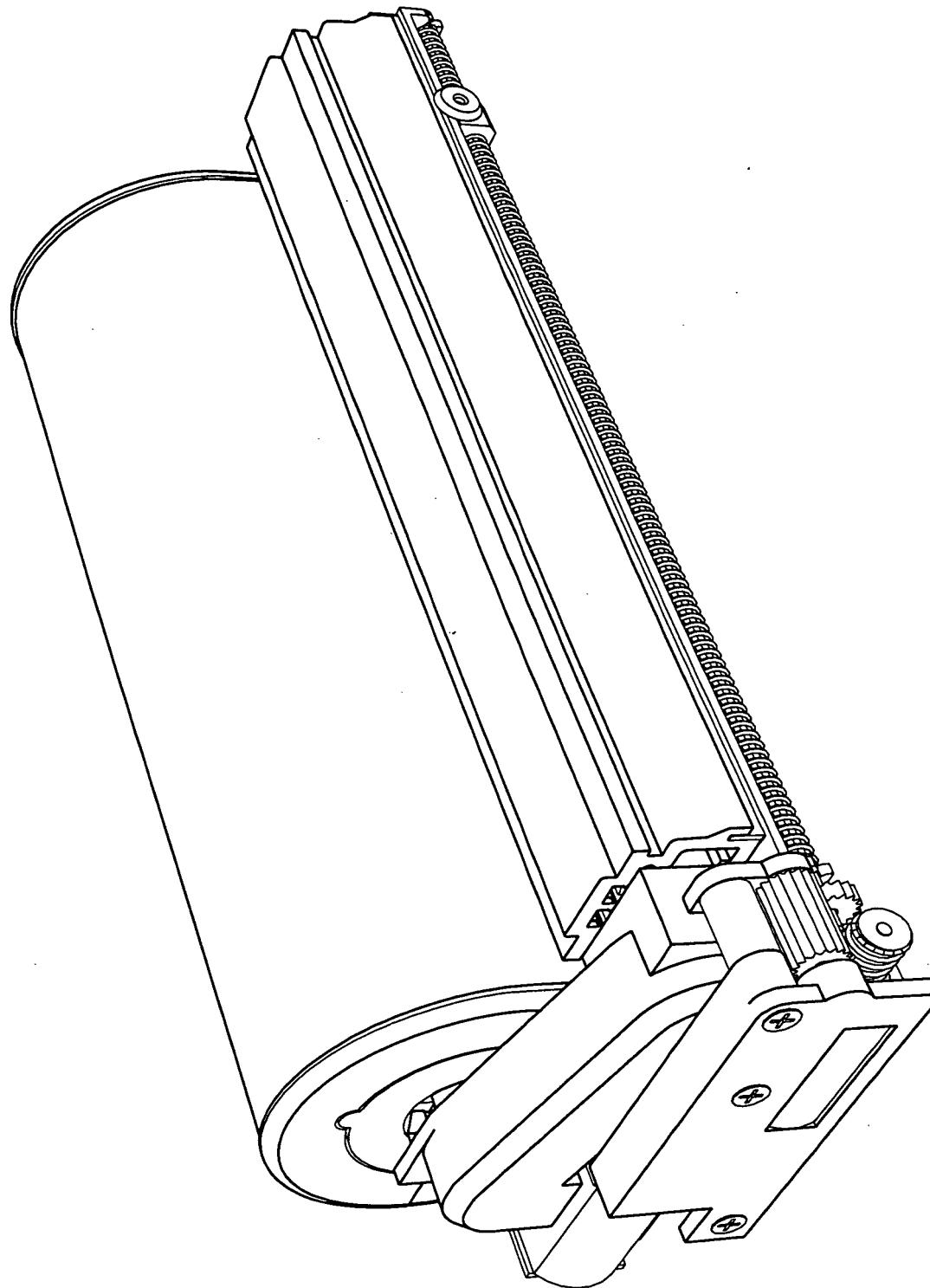


FIG. 99

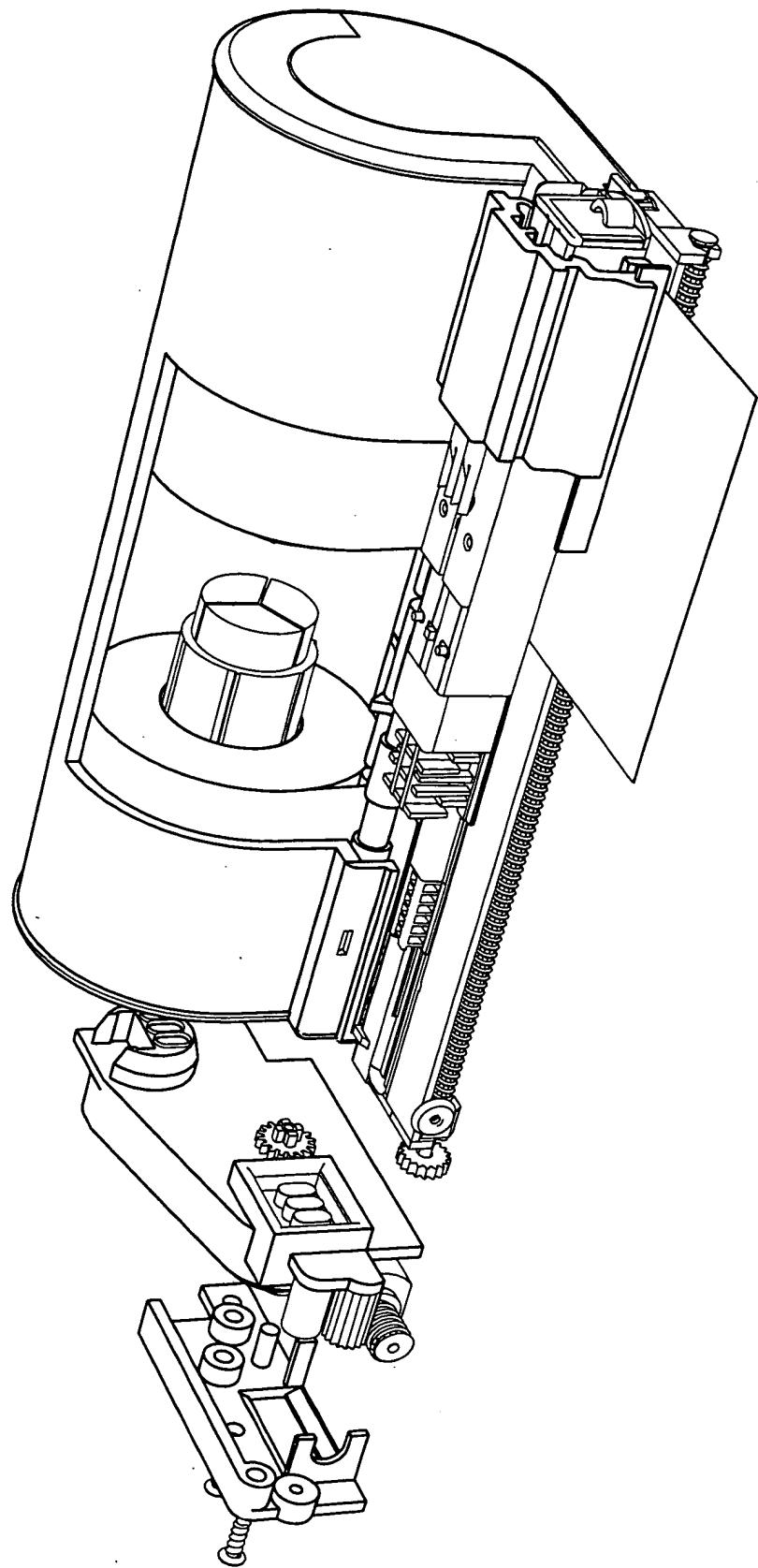


FIG. 100

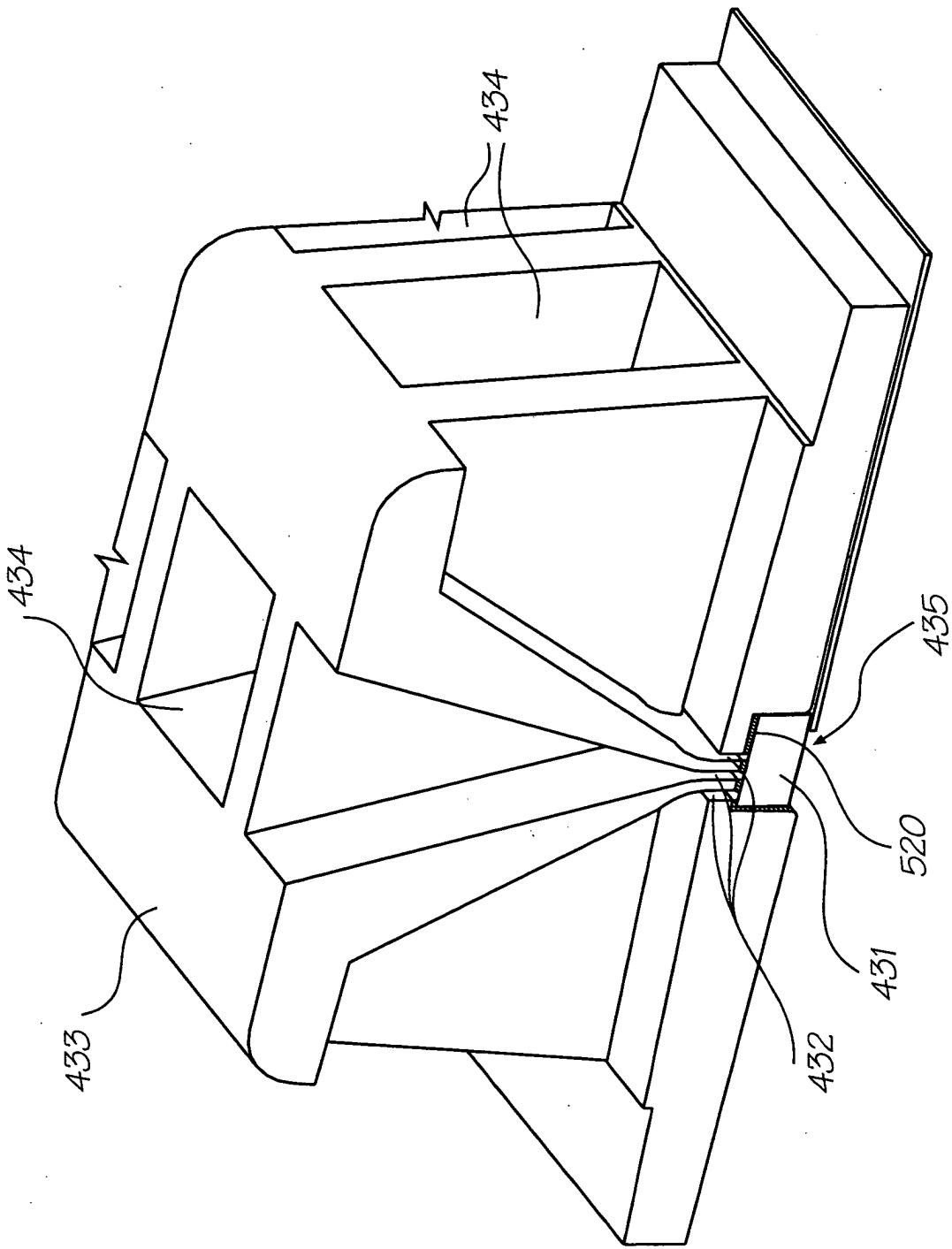


FIG. 101

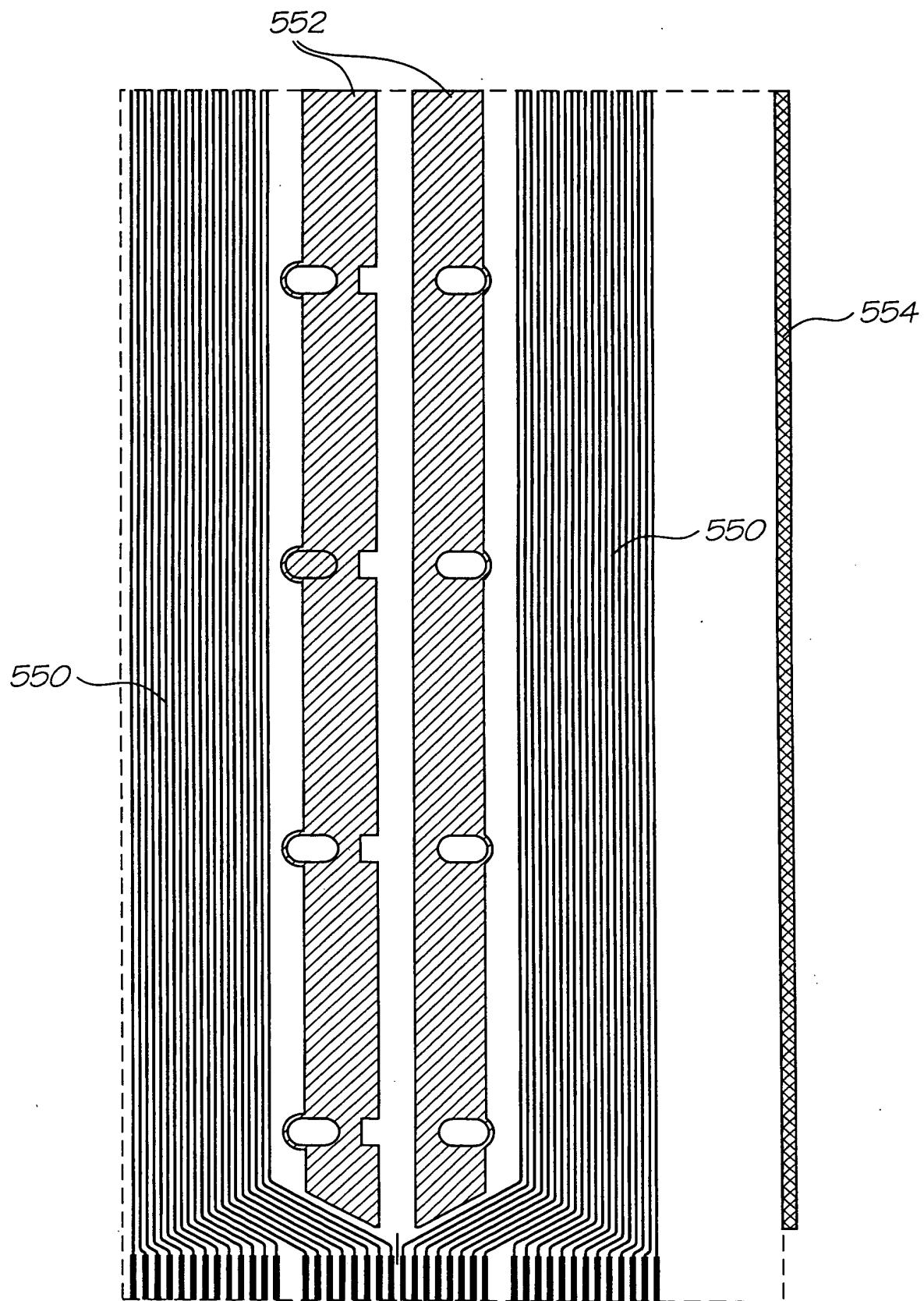


FIG. 102

76/76

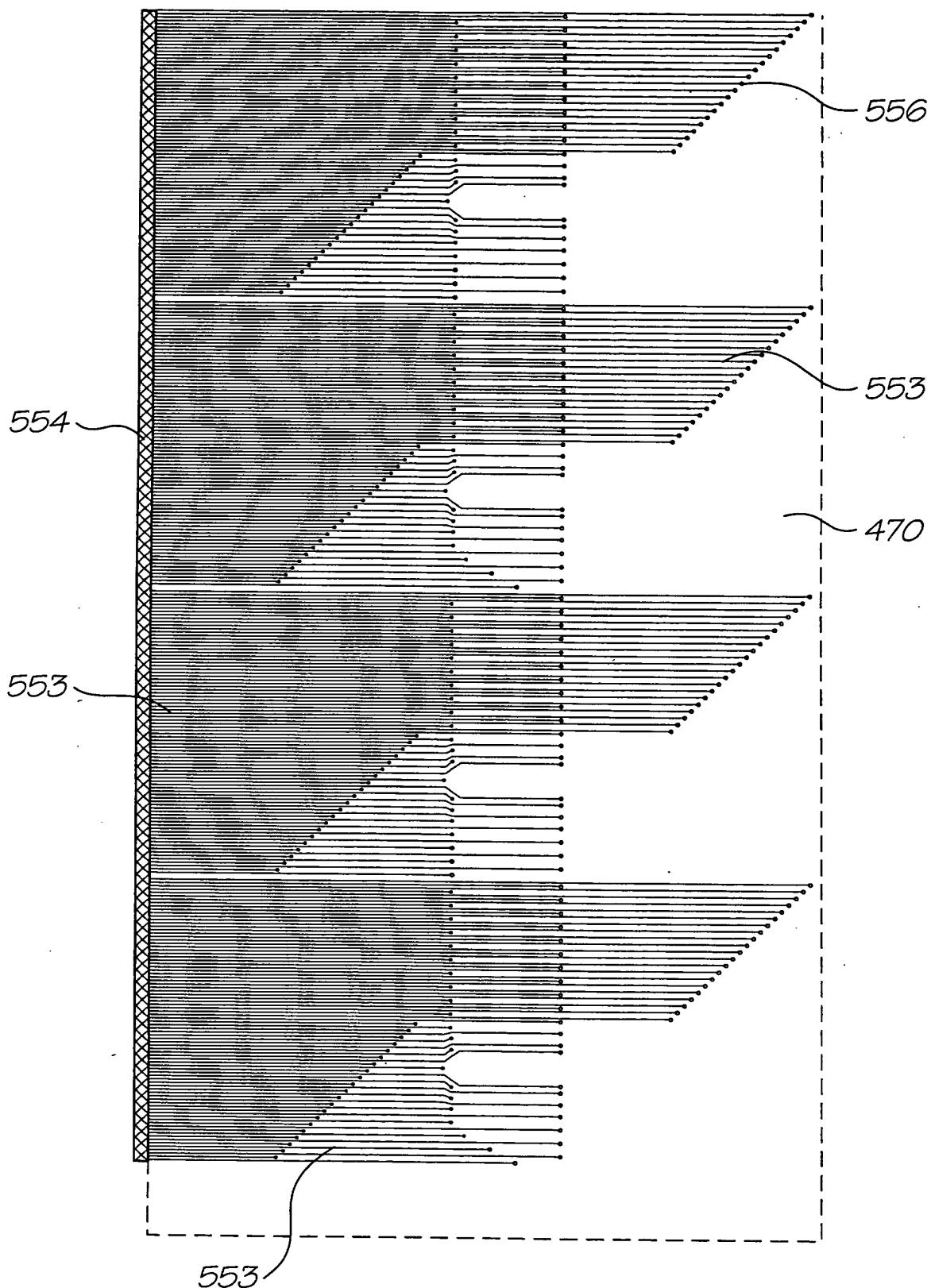


FIG. 103